10-19-00 A

DOCKET NO. : OHB-0047 **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Dean F. Boyer and W. Edward Hammersla, III

Serial No.: Unknown **Group Art Unit:** Unknown

Filing Date: Herewith **Examiner:** Unknown

For: POINT OF SERVICE THIRD PARTY FINANCIAL MANAGEMENT VEHICLE FOR THE HEALTHCARE INDUSTRY

EXPRESS MAIL LABEL NO: EL568027291US
DATE OF DEPOSIT: October 18, 2000

Box ☒ Patent Application

☐ Provisional ☐ Design

Assistant Commissioner for Patents
Washington DC 20231

Sir:

PATENT APPLICATION TRANSMITTAL LETTER

Transmitted herewith for filing, please find

☒ A Utility Patent Application under 37 C.F.R. 1.53(b).

It is a continuing application, as follows:

☐ continuation ☒ divisional ☐ continuation-in-part of prior application number 09 / 031,968 filed 02/27/98.

☐ A Provisional Patent Application under 37 C.F.R. 1.53(c).

☐ A Design Patent Application (submitted in duplicate).

Including the following:

☐ Provisional Application Cover Sheet.

☐ New or Revised Specification, including pages ___ to ___ containing:

- ☐ Specification
- ☐ Claims
- ☐ Abstract
- ☐ Substitute Specification, including Claims and Abstract.

  - ☐ The present application is a continuation application of Application No. _____ filed _____. The present application includes the Specification of the parent application which has been revised in accordance with the amendments filed in the parent application. Since none of those amendments incorporate new matter into the parent application, the present revised Specification also does not include new matter.

  - ☐ The present application is a continuation application of Application No. _____ filed _____, which in turn is a continuation-in-part of Application No. _____ filed _____. The present application includes the Specification of the parent application which has been revised in accordance with the amendments filed in the parent application. Although the amendments in the parent C-I-P application may have incorporated new matter, since those are the only revisions included in the present application, the present application includes no new matter in relation to the parent application.

☒ A copy of earlier application Serial No. 09/031,968 Filed 02/27/98, including Specification, Claims and Abstract (pages 1 - 37), to which no new matter has been added TOGETHER WITH a copy of the executed oath or declaration for such earlier application and all drawings and appendices. Such earlier application is hereby incorporated into the present application by reference.

☒ Please enter the following amendment to the Specification under the Cross-Reference to Related Applications section (or create such a section) : "This Application:

☐ is a continuation of ☒ is a divisional of ☐ claims benefit of U.S. provisional Application Serial No. 09/031,968 filed 02/27/98.

☐ Signed Statement attached deleting inventor(s) named in the prior application.

☐ A Preliminary Amendment.

☒ 11 Sheets of ☒ Formal ☐ Informal Drawings.

☐ Petition to Accept Photographic Drawings.

☐ Petition Fee

☒ An ☒ Executed ☐ Unexecuted Declaration or Oath and Power of Attorney from prior application..

☒ An Associate Power of Attorney.

☐ An ☐ Executed ☐ Copy of Executed Assignment of the Invention to _____ _____.

☐ A Recordation Form Cover Sheet.

☐ Recordation Fee - $40.00.

☒ The prior application is assigned of record to Onehealthbank.com

☐ Priority is claimed under 35 U.S.C. § 119 of Patent Application No. _____ filed _____ in _____ (country).

☐ A Certified Copy of each of the above applications for which priority is claimed:

☐ is enclosed.

☐ has been filed in prior application Serial No. _____ filed _____.

☒ An ☐ Executed or ☒ Copy of Executed Earlier Statement Claiming Small Entity Status under 37 C.F.R. 1.9 and 1.27

☒ is enclosed.

☒ has been filed in prior application Serial No. 09/031,968 filed 02/27/98, said status is still proper and desired in present case.

☐ Diskette Containing DNA/Amino Acid Sequence Information.

☐ Statement to Support Submission of DNA/Amino Acid Sequence Information.

☐ The computer readable form in this application _____, is identical with that filed in Application Serial Number _____, filed _____. In accordance with 37 CFR 1.821(e), please use the ☐ first-filed, ☐ last-filed or ☐ only computer readable form filed in that application as the computer readable form for the instant application. It is understood that the Patent and Trademark Office will make the necessary change in application number and filing date for the computer readable form that will be used for the instant application. A paper copy of the Sequence Listing is ☐ included in the originally-filed specification of the instant application, ☐ included in a separately filed preliminary amendment for incorporation into the specification.

☒ Information Disclosure Statement.

- ☒ Attached Form 1449.
- ☐ Copies of each of the references listed on the attached Form PTO-1449 are enclosed herewith.

☐ A copy of Petition for Extension of Time as filed in the prior case.

☐ Appended Material as follows: _____.

☒ Return Receipt Postcard (should be specifically itemized).

☐ Other as follows: _____

_____

_____.

FEE CALCULATION:

☒ Cancel in this application original claims 2 - 23 of the prior application before calculating the filing fee. (At least one original independent claim must be retained for filing purposes.)

			SMALL ENTITY		NOT SMALL ENTITY	
			RATE	FEE	RATE	FEE
PROVISIONAL APPLICATION			$75.00	$	$150.00	$
DESIGN APPLICATION			$160.00	$	$320.00	$
UTILITY APPLICATIONS BASE FEE			$355.00	$355.00	$710.00	$
UTILITY APPLICATION; ALL CLAIMS CALCULATED AFTER ENTRY OF ALL AMENDMENTS						
	No. Filed	No. Extra				
TOTAL CLAIMS	1 - 20 =		$9 each	$	$18 each	$
INDEP. CLAIMS	1 - 3 =		$40 each	$	$80 each	$
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			$135	$	$270	$
ADDITIONAL FILING FEE				$		$
TOTAL FILING FEE DUE				$355.00		$

☒ A Check is enclosed in the amount of $ 355.00 .

☒ The Commissioner is authorized to charge payment of the following fees and to refund any overpayment associated with this communication or during the pendency of this application to deposit account 23-3050. This sheet is provided in duplicate.

☐ The foregoing amount due.

☒ Any additional filing fees required, including fees for the presentation of extra claims under 37 C.F.R. 1.16.

☒ Any additional patent application processing fees under 37 C.F.R. 1.17 or 1.20(d).

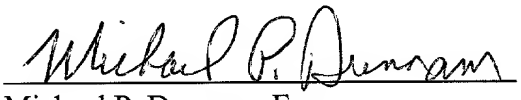
☐ The issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance.

☒ The Commissioner is hereby requested to grant an extension of time for the appropriate length of time, should one be necessary, in connection with this filing or

any future filing submitted to the U.S. Patent and Trademark Office in the above-identified application during the pendency of this application. The Commissioner is further authorized to charge any fees related to any such extension of time to deposit account 23-3050. This sheet is provided in duplicate.

SHOULD ANY DEFICIENCIES APPEAR with respect to this application, including deficiencies in payment of fees, missing parts of the application or otherwise, the United States Patent and Trademark Office is respectfully requested to promptly notify the undersigned.

Date: October 18, 2000



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Serial or Patent No.: N/A Attorney's Docket No.: OHB-0002

Date Filed or Issued: Herewith

For: POINT OF SERVICE THIRD PARTY FINANCIAL MANAGEMENT VEHICLE FOR THE HEALTHCARE INDUSTRY

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(d) and 1.27(c)) - SMALL BUSINESS CONCERN

I hereby declare that I am:

( ) the owner of the small business concern identified below;

(xx) an official empowered to act on behalf of the concern identified below:

NAME OF CONCERN: OHB, Inc.
ADDRESS OF CONCERN: 379 Princeton-Hightstown, Building 2
Cranbury, New Jersey 08512

I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that: (1) the number of employees of the concern, including those of its affiliates, does not exceed 500 persons; and (2) the concern has not assigned, granted, conveyed, or licensed, and is under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who could not be classified as an independent inventor if that person had made the invention, or to any concern which would not qualify as a small business concern or a nonprofit organization under this section. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention entitled **POINT OF SERVICE THIRD PARTY FINANCIAL MANAGEMENT VEHICLE FOR THE HEALTHCARE INDUSTRY** by inventor(s) **Dean F. Boyer and W. Edward Hammersla, III** described in

(XX) specification filed herewith.

( ) application serial no. ______, filed ______.

( ) patent no. _____, issued _____.

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights in the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

***NOTE: Separate verified statements are required for each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)**

FULL NAME: @@
ADDRESS: @@
( ) INDIVIDUAL ( ) SMALL BUSINESS CONCERN ( ) NONPROFIT ORGANIZATION

FULL NAME: @@
ADDRESS: @@
( ) INDIVIDUAL ( ) SMALL BUSINESS CONCERN ( ) NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING W. Edward Hammersla, III
TITLE OF PERSON SIGNING President
ADDRESS OF PERSON SIGNING 379 Princeton-Hightstown Rd, Bldg. 2
Cranbury, New Jersey 08512

SIGNATURE

27 Feb 1998
DATE

POINT OF SERVICE THIRD PARTY FINANCIAL MANAGEMENT VEHICLE FOR THE HEALTHCARE INDUSTRY

FIELD OF THE INVENTION

This invention relates to a system and method for providing adjudicated third party payment at the point of service, and more particularly, to a system and method for determining at the point of service the portion of a service or product which is to be paid by a third party payor, such as a health insurance company, and the portion of the service or product which is to be paid by the customer (patient) and for providing payment settlement at the point of service.

BACKGROUND OF THE INVENTION

The costs of administering the third party payment system used in the healthcare industry are astronomical. It has been estimated that as much as 25% of healthcare costs are administrative costs, as opposed to clinical costs. This is due, in large part, to the difficulty in obtaining timely and efficient collection of payment from patients and third party payors (*e.g.*, insurance companies). Conventionally, in only about 40% of patient visits can the amount of the patient payment be determined while the patient is in the healthcare provider's office, while approximately 60% of the time the patient payment amount can be determined only after the healthcare provider sends a claim to the third party payor and

the third party payor adjudicates the claim, which typically delays the collection process by at least 4-6 weeks. When the patient payment amount can be determined at the time of service, payment cards, such as credit cards, debit cards, and the like, have been used to collect these payments. However, those claims requiring adjudication, *i.e.*, where the healthcare provider cannot determine the patient payment amount at the time of service, healthcare providers have traditionally billed the patients on 30-day payment terms after sending a claim to the insurance company. Due to inefficiencies, it has been estimated by industry sources that the billing and collection costs for a single copayment is $10-$15 and that the average collection time is 45 days.

In conventional automated third party payor systems in the healthcare industry, the claim for payment is generated by the administrative staff of the healthcare provider or healthcare maintenance organization and transmitted electronically to a clearinghouse that accepts the electronic transmission, edits and processes the transmission, and reroutes and sends them electronically to the appropriate third party payors. In the health insurance industry, intermediaries receive claims from healthcare providers or other claimants, edit the claims data for validity and accuracy, translate the data from a given format into one acceptable to the intended third party payor (*e.g.*, insurance company), and forward the processed claim to the appropriate third party payor. The third party payor then adjudicates the claim and makes payment/reimbursement at a time, as noted above, which is typically weeks after the service was rendered. As used herein, adjudication is the steps through which a claim for payment is processed by the third party payor to verify coverage eligibility, to determine the appropriateness of the care and services rendered, and to establish the amount of reimbursement. Prior art adjudication ranges from fully automated to partially automated to fully manual. However, the adjudication is typically performed by the third party payor during processing of the claim well after the service has been

rendered. Of course, disputes regarding reimbursable services extend the payment period and increase the anxiety of the consumers and providers of healthcare products and services.

To date, the emphasis of automation in the healthcare industry has been in streamlining the claim submission and adjudication process and in streamlining the payment process for the portion of the payment which can be determined at the time of service. Unfortunately, previous efforts at applying automation to such an inefficient process have produced only small, incremental cost savings.

For example, health insurance management system such as that described by Sackler et al. in U.S. Patent No. 5,235,507 processes health insurance claims for self-insurers using a computer program. The program is used by a health insurance administrator or management company to automatically process health insurance claims even where the claims fall under different insurance policies. While the disclosed program facilitates the operations of the health insurance administrator or management company, it does nothing to improve the payment efficiencies at the point of service.

Cummings, Jr. describes in U.S. Patent No. 5,301,105 a healthcare management system that integrates the patient, the healthcare provider, bank or other financial institution, insurance company, utilization reviewer, and employer to provide comprehensive pre-treatment, treatment, and post-treatment healthcare and the required financial support. The system purportedly allows for total health management which takes into account the patient's available cash balances, insurance coverage, and the like in administering the patient's wellness. A terminal at the physician's office accepts data entry through conventional credit cards as well as special "smart" cards. However, no technique for providing adjudicated third party payment at the point of service is described.

Recently, payment cards, such as VISA® cards, have become widely used to facilitate the payment process for readily ascertainable amounts such as copayments at the point of service in all segments of the healthcare market, including

hospitals, medical group practices, and dentists. Healthcare providers' needs for faster, more efficient collections, consumers' rising healthcare expenditures, and the increasing costs of healthcare have led to the increased use of such payment cards for such readily ascertainable amounts. As described in U.S. Patent No. 5,583,760, private payment cards also have been issued to patients so that the patients can pay for medical services at participating providers; however, payment cards have not previously been used as the vehicle to access an adjudicated third party payment system for providing adjudicated settlement of healthcare claims at the point of service. This is the ultimate "streamlining" of the third party payment process and is the objective of the present invention.

To date, VISA® has used the Patient Easy Pay Consent form and a point-of-sale terminal to streamline payment by patients using a VISA® card for those amounts that could not be determined at the time of service. In that system, the healthcare providers swipe the patient's VISA® card at the terminal to capture the card information and the patient signs a receipt produced by the terminal to authorize the healthcare provider to charge the balance due for the patient's copayments, deductibles, and balances not covered by insurance to the patient's VISA® card account. The terminal then sends the Patient Easy Pay Consent information to the healthcare provider's computer for retrieval after adjudication. A conventional electronic payment authorization is launched after adjudication. However, claims processing and adjudication are performed in the conventional manner, thus causing a substantial delay in settling the balances due.

An adjudicated third party payment system is desired which eliminates the delay in claims processing and the associated administrative costs so that a healthcare consumer can settle payment at the point of service much as a consumer settles a hotel bill at checkout. The present invention has been designed to meet this great need in the art.

SUMMARY OF THE INVENTION

The present invention addresses the above-mentioned needs in the art by providing a point of service third party adjudicated payment system and method which provides for the creation of an adjudicated settlement transaction at a point of service which designates the portion of the service to be paid by the third party payor and the portion to be paid by the customer. In accordance with the invention, such a system comprises a point of service terminal which accepts a payment system access card, such as a credit card, debit card, or purchase card, for payment for a purchase of a service and/or product by a customer, where at least part of the purchase is reimbursable by a third party payor. In accordance with the invention, the point of service terminal creates a purchase transaction which is adjudicated by an adjudication engine substantially in real-time (at the time of service or in a purchase transaction processing batch) to determine a first portion of the purchase which is to be paid by the third party payor and a second portion of the purchase which is to be paid by the customer. An adjudicated settlement transaction is then returned to the point of service terminal designating at least the first portion and the second portion for payment. The payment system access card provides access to a payment system which transfers funds in accordance with the adjudicated settlement transaction whereby the third party payor is debited by the first portion and the point of service provider is paid the first portion and a payment account accessible by the payment system access card is charged at least the second portion and the point of service provider is paid the second portion as with typical payment card transactions.

In a preferred embodiment of the invention, the adjudication engine is connected to a node on the Internet and the point of service terminal accesses the adjudication engine via an Internet connection to the node. The adjudication engine itself preferably includes a data driven rules engine which processes data from the customer, the service provider, the third party payor, and the payment system to determine the

first portion of the payment to be paid by the third party payor. Preferably, the purchase transaction includes a product and/or a service code which the adjudication engine compares to payment parameters and conditions from the third party payor to determine the value of the first portion of the purchase to be paid by the third party payor. In a preferred healthcare implementation of the invention, the point of service provider is a healthcare provider and the payment parameters and conditions are determined by a healthcare policy between the customer's employer and the third party payor.

In the preferred embodiment of the invention, the payment system includes a credit card network, and the adjudicated settlement transaction is formatted as a credit card transaction for processing by the credit card network. Preferably, the payment system access card is cobranded so as to include an account number for the credit card network and, in the preferred healthcare implementation, for the healthcare policy as well.

The corresponding method of providing third party adjudicated payment at a point of service in accordance with the invention preferably comprises the steps of:

providing a payment system access card, such as a credit card, debit card, or purchase card, to a point of service provider for payment for a purchase of a service and/or product by a customer, at least part of the purchase being reimbursable by a third party payor;

transmitting a purchase transaction to an adjudication engine for processing;

the adjudication engine adjudicating the purchase transaction substantially in real-time so as to determine a first portion of the purchase which is to be paid by the third party payor and a second portion of the purchase which is to be paid by the customer;

the adjudication engine returning an adjudicated settlement transaction to the point of service designating at least the first portion and the second portion; and

transferring funds in accordance with the adjudicated

settlement transaction whereby the third party payor is debited by the first portion and the point of service provider is paid the first portion and a payment account accessible by the payment system access card is charged at least the second portion and the point of service provider is paid the second portion.

In the preferred embodiment of the method, the step of transferring funds comprises the steps of charging the payment account by the first and second portions and crediting the payment account by the first portion upon adjudication. Alternatively, the funds transferring step may comprise the steps of debiting the third party payor by the first portion, paying the point of service provider the first portion, charging the payment account by at least the second portion, and paying the point of service provider the second portion. The funds transferring step preferably also comprises the steps of formatting the adjudicated settlement transaction as a credit card transaction and processing the adjudicated settlement transaction in a credit card network.

Preferably, the adjudicating step comprises the step of comparing product and/or service codes in the purchase transaction to payment parameters and conditions from the third party payor to determine the value of the first portion of the purchase to be paid by the third party payor. In a preferred healthcare implementation, the payment system access card is provided to the healthcare provider in the providing step prior to provision of healthcare services, and the method comprises the additional step of accessing the adjudication engine to verify patient eligibility for payment for services by the third party payor prior to provision of healthcare services by the healthcare provider. This feature of the invention allows the doctor and patient to consider costs when determining the course of a treatment. A coverage profile for the patient may also be provided to the healthcare provider for comparison with a preliminary diagnosis for healthcare services to be provided to the patient prior to providing healthcare services to the patient.

In accordance with another aspect of the invention, a method of converting a healthcare transaction into a credit card transaction for payment by a patient is provided. Such a method in accordance with the invention preferably comprises the steps of:

transmitting at least one of healthcare product and service codes for healthcare products and services purchased by the patient from a healthcare provider at a point of service to an adjudication engine for processing;

the adjudication engine adjudicating the product and service codes substantially in real-time so as to determine a first portion of the purchased healthcare products and services which is to be paid by a third party payor and a second portion of the purchased healthcare services which is to be paid by the patient;

the adjudication engine returning an adjudicated settlement transaction to the point of service designating at least the first portion and the second portion;

formatting the adjudicated settlement transaction as a credit card transaction at the point of service; and

processing the formatted adjudicated settlement transaction in a credit card network for payment.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other novel features and advantages of the invention will become more apparent and more readily appreciated by those skilled in the art after consideration of the following description in conjunction with the associated drawings, of which:

Figure 1 illustrates a point of service third party adjudicated payment system in accordance with a currently preferred embodiment of the invention.

Figure 2 illustrates a currently preferred embodiment of the adjudication engine in the system of Figure 1.

Figure 3 illustrates a flow diagram of the use of the payment system of the invention for payment of a healthcare provider.

Figure 4 illustrates a flow diagram of the point of service activity by a healthcare provider when using the payment system of the invention for payment.

Figure 5 illustrates a credit card statement for a cobranded healthcare/credit card account used to access the payment system of the invention.

Figure 6 illustrates an explanation of benefits (EOB) statement corresponding to the credit card statement of Figure 5.

Figure 7 illustrates a sample adjudicated healthcare settlement transaction generated by the payment system of the invention for a simple healthcare transaction.

Figure 8 illustrates the life cycle of a claim submitted by a healthcare provider for processing using the adjudicated third party payment system of the invention.

DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS

A preferred embodiment of the invention will now be described in detail with reference to Figures 1-8. Those skilled in the art will appreciate that the description given herein with respect to those figures is for exemplary purposes only and is not intended in any way to limit the scope of the invention. All questions regarding the scope of the invention may be resolved by referring to the appended claims.

As noted above, the term "adjudication" as used herein is the process through which a claim for payment is processed by the third party payor to verify coverage eligibility, to determine the appropriateness of the care and services rendered, and to establish the amount of reimbursement. As will be more apparent from the following detailed description, the invention provides a method for adjudicating a claim substantially in real-time by providing immediate access by the point of service provider to an adjudication engine specially developed to handle claims of the type generated by that point of service provider for reimbursement by a third party payor. While it is desired that the adjudication take place virtually instantaneously so that

payment may be completely settled at the point of service at the time of service, "real-time" as used herein is also intended to permit "batch" processing and settlement of the claims processed by the service provider. For example, a healthcare administrative office may settle all of its claims for a given day overnight by batch processing the adjudicated settlement transactions received that day. In such a case, the adjudicated settlement transactions submitted that day may not actually be paid for a day or two. Similar techniques are used by hotels and airlines and are contemplated within the scope of the invention. Also, as used herein, an "adjudicated settlement transaction" is a statement or invoice provided at the point of service which specifies how much the third party payor will pay on a given claim and how much is the responsibility of the customer (*e.g.*, the insured patient).

Figure 1 illustrates a point of service third party adjudicated payment system 10 in accordance with a currently preferred embodiment of the invention. Although described in the preferred context of the payment of healthcare claims by an insurance company or other healthcare administrator, those skilled in the art will appreciate that the system and method of the invention may be used in all types of transactions involving resolution of payment by two or more parties obligated contractually or otherwise to apportion payment for received products and services.

As illustrated in Figure 1, the system 10 of the invention is accessed by a plurality of product/service providers 12, such as doctor's offices, hospitals, pharmacies, and the like, who provide services and products such as physician care, hospital care, dental care, pharmaceutical products, lab tests, prosthetics, surgical equipment, and the like. In accordance with the invention, each such provider 12 has a point of service terminal which accepts a payment system access card, such as a credit card, debit card, or purchase card, for payment for a purchase of a service and/or product by a customer. As will be explained in more detail below, the result of a patient's interaction with the healthcare provider

12 is a healthcare transaction (HCT) which generally includes a claim for payment by the third party payor. As will also be explained below, each patient has access to an account which is tied to the cardholder, which may be the patient or a member of his or her family.

The payment system access card in accordance with the preferred healthcare embodiment of the invention is preferably a cobranded VISA® card, although other types of payment cards such as Mastercard®, Novis, Diner's Club, and Federal Reserve may, of course, be used. The "cobranding" partner in such an embodiment is the third party payor, which may include, by way of example, insurance companies, HCFA (Medicare), State Agencies (Medicaid), and self insured groups (HMOs). Typically, the third party payor contracts with the patient or the patient's employer or some other organization or association to which the patient belongs to provide payment through an administrator for services rendered by the healthcare provider. The third party payor also contracts with groups of Healthcare Provider Networks (HCPs) to fix prices on a per patient or per procedure basis. Preferably, the cobranded payment system access card is distributed to the insured through the insured's employer in place of the conventional healthcare ID cards. The cobranded card typically includes the information provided on the payment system access card as well as the healthcare ID card, although the amount of printed data may require that some of the information be printed on a sleeve for the payment system access card. Preferably, the account number for the payment system account and the healthcare account are the same to avoid confusion. The adjudicated third party payment system of the invention is accessed by swiping the card or entering the card number at a point of service terminal in the offices of the healthcare provider 12.

The cobranded payment card preferably carries two balances, one for standard transactions (retail, travel, entertainment, etc.), and one for healthcare purchases (doctors, hospitals, pharmacies, optical, dental, etc.).

Generally, the healthcare balance carries a favorable interest rate. Also, all purchases, regardless of type, preferably generate "deductible dollars™" (cash back that is applied to the patient's out-of-pocket healthcare balance) at the rate of, *e.g.*, one percent, which allows the cardholder to effectively eliminate his or her out-of-pocket expenses.

In the preferred implementation of the invention, the point of service terminal includes an Internet connection 14 to a node containing an Internet merchant bank 16 which is to process the credit card transaction via a credit card network 18 in the conventional manner. As illustrated, the Internet bank 16 operates as a conventional merchant bank for credit card processing by providing access to the credit card network 18 for processing of credit card transactions and also operates as a credit card issuing bank by providing cardholder accounts 20 used to facilitate credit card payment by the cardholder, keep track of balances and interest, and the like. However, in accordance with the invention, the Internet bank 16 further includes a direct connection to an adjudication engine 22 which, for example, takes a healthcare transaction (HCT) from the healthcare provider 12 and the patient, determines (adjudicates) the amount of the submitted claim which is to be paid by a third party payor 24, and creates an Adjudicated Settlement Transaction (AST) which pays the healthcare provider 12, bills the third party payor 24, and bills the patient. In the preferred embodiment, the Internet bank 16 has a web page which provides secure access to the adjudication engine 22 as a selection option for one accessing the Internet bank's web site, such as an administrator of the service provider 12. As will be explained in more detail below, the adjudication engine 22 processes, substantially in real-time, the claim from the service provider in accordance with parameters and conditions from the third party payor 24 to determine the portion of the claim to be paid by the third party payor 24. The "adjudicated" amount is then returned to the service provider 12 via the Internet connection 14 as an Adjudicated Settlement Transaction ready for payment. Since the Adjudicated

Settlement Transaction specifies the amount the third party payor 24 will pay, the remaining balance in the claim, if any, may be charged directly to the customer's payment system access card for processing and payment via credit card network 18 in the conventional fashion. As when settling with a hotel at checkout, the service provider 12 has payment settled by the customer before he or she leaves the office. Also, the service provider 12 will know right away how much the third party payor 24 is obligated to pay towards the service provided.

Typically, a separate adjudication engine 22 is provided for each third party payor 24 and/or each company or organization through which the third party payment policy or contract is administered. In the healthcare context, for example, the appropriate parameters and conditions data 26 for the policy or policies of the company or organization through which the patient is insured are loaded into adjudication engine 22 upon submission of a claim for adjudication. As shown, a single third party payor 24 provides the different parameters and conditions 26 for the respective policies it issues to different companies so that the proper payment parameters and conditions for the policy elected by the employees of the respective companies are loaded into the adjudication engine 22 when a claim for a particular insured employee is received by the adjudication engine 22.

Finally, third party payor accounts 28 are provided which are administered by the third party payor 24 and/or the Internet bank 16 for facilitating the transfer of funds for the portions of the claims the third party payor 24 is obligated to pay. Internet bank 16 handles the transfer of these monies to the appropriate service provider 12 in a timely fashion.

Figure 2 illustrates a currently preferred embodiment of the adjudication engine 22 utilized in the system of Figure 1 in the healthcare environment. As shown, at the center of the adjudication engine 22 resides a rules processor 30 whose sole purpose is to adjudicate and price healthcare transactions that are submitted by a healthcare provider 12. The rules processor 30 is a data driven software mechanism that derives

rules from the inputted data and executes based on the algorithm or expressions contained within the rules. The order by which these rules are executed is also data driven and is contained within the rules of engagement that are defined in the Policy Database 32 of the third party payor 24. The rules processor 30 performs two primary tasks: the first is to decide whether a healthcare transaction is reimbursable and the second is to price the amount by which the healthcare provider 12 is to be reimbursed based on the healthcare transaction or claim received from the Clinical Pathways Database 34.

To accomplish these tasks the rules processor 30 needs to get information from the following databases:

Policy Database 32 - Information pertaining to the patient's coverage is defined in this database. The limits by which the policy operates, such as deductibles, are stored as policy parameters. Preexisting, current, and incident conditions are all stored as conditions. The rules that govern which services and products are covered and in which order are stored as constraints. The methods by which conditions, parameters, and constraints are engaged and adjudicated is stored within policy rules. These policy rules are used by the rules processor 30 to execute algorithms and expressions that act on parameters, constraints and conditions that use data from other databases such as the Clinical Pathway Database 34, Healthcare History Database 36, and Cardholder Database 38. The Policy Database also includes pricing information such as deductible, copay, and coinsurance.

Clinical Pathways Database 34 - Information pertaining to the current healthcare transaction (HCT), links to previous HCTs (the clinical pathway), and the state of each HCT as it exists in the pathway, as well as any related healthcare transactions are stored in this database. This information is critical to understanding the order in which services and products were delivered. This data is used by the rules processor 30 to establish whether or not a healthcare transaction should be reimbursed in accordance with the rules of engagement set forth in the Policy Database 32. Pathway

information is often critical in determining whether a service or product in the current HCT is valid within the context of the policy.

Healthcare History Database 36 - Information pertaining to the patient's healthcare history is stored in this database. This information is captured over time from the patient and includes a collection of atomic healthcare facts about each patient such as the services and products from HCTs, known medical conditions, allergies, and the like. The rules processor 30 uses this data to execute algorithms that pertain to the conditions that exist in the Policy Database 32. In many cases the healthcare history gives overriding information that enables the rules processor 30 to reimburse a healthcare transaction that otherwise would not be reimbursable based on current conditions.

Cardholder Database 38 - Information pertaining to the patient and his or her accounts and balances are maintained in this database. The balances are used to identify when the patient or the patient's family has reached their thresholds for products or services as stated by the parameters defined in the Policy Database 32. The patient information contains the demographic facts needed by the rules processor 30 to execute algorithms that pertain to who the patient is and why certain services would or would not be reimbursable (*e.g.*, a male could not have received any services related to giving birth to a child). In other words, demographic facts, account balances, deductible balances, out-of-pocket balances, policy elections, and billing terms for all cardholders and family members can be found in this database.

Provider Network Database 40 - Information pertaining to the healthcare provider 12 and what they are to be reimbursed for services and products is primarily stored in this database. The rules processor 30 uses pricing data that specifies Capitation, Fee for Services, usual reasonable and customary (URC) charges by locale and in-network/out-of-network pricing for a healthcare provider 12 to price the healthcare transaction. This lets the healthcare provider 12 know what

the third party payor 24 is willing to reimburse for a given patient's healthcare transaction.

Standards Database 42 - Information pertaining to the universe of classification standards by which diagnosis and procedural products and services are coded for use in reporting the services and procedures in a healthcare transaction is maintained in this database. These standards are the constraints by which the rules processor 30 can compare and execute rules. These standards also include universal rules for bundling (combining atomic procedures into comprehensive ones). In the healthcare context, the vast majority of healthcare products and services are defined and standardized by three bodies:

1. The U.S. Government sets the International Classification of Disease (ICD) standards by which most healthcare providers 12 classify and report diagnostic information. It also sets the Healthcare Financing Administration (HCFA) Common Procedural Coding System (HCPCS) for classifying and reporting durable medical equipment for Medicare transactions.

2. The American Medical Association sets the Current Procedural Terminology (CPT) standard for classifying and reporting medical procedures. The CPT classification system has a set of rules to determine when sets of individual procedures are to be combined into single more comprehensive ones (bundling).

3. The American Dental Association sets the Current Dental terminology (CDT) standard. This is similar to CPT, but covers the dental procedures which are not covered by CPT.

The rules processor 30 integrated with databases 32-42 enables the adjudication engine 22 to receive a healthcare transaction from the healthcare provider 12, to adjudicate and price the healthcare transaction, and to return an Adjudicated Settlement Transaction to the healthcare provider 12. Those skilled in the art will appreciate that the rules processor is a software system that can be written in several programming languages ranging from the expert languages such as LISP,

Prologue, and OPS5 to the programming languages of C++, Visual Basic 5.0 and SQL. The key to the rules processor is that the rules are in the data and thus vary in accordance with the data. Also, the rules only need to be interpolated by any of a number of different processors running a rules processor algorithm written in any of these languages.

Figure 3 illustrates a flow diagram of the use of the payment system of the invention for payment of a healthcare provider 12. Of course, a similar scheme may be used for processing of other types of transactions besides healthcare transactions.

As illustrated in Figure 3, the first step in the method of the invention is to issue a cobranded healthcare/payment card to the patient at step 100. As noted above, the cobranded card is preferably issued through the patient's employer in place of the patient's conventional healthcare ID card. If the patient (employee) is not credit-worthy, the employer may issue a securitized card that may or may not be cobranded, thereby exempting the employee from participation in the payment system described herein. Also, dependent children under the age of 21 may receive a non-branded card unless the employee requests otherwise. Regardless of branding, all payment cards will provide credit for healthcare transactions in the third party payment system of the invention, while the cobranded cards also may be used as a conventional payment card as well as a mechanism for accessing the third party adjudicated payment system of the invention.

At step 102, the patient, cobranded payment card in hand, purchases a product or service. If the product or service is not eligible for third party payment, the entire payment amount is charged to the customer's payment card account in a conventional manner. However, if the product or service is eligible for third party payment, then the resulting claim or transaction is processed using the adjudicated third party payment system of the invention. An example of point of service activity when the card is used to purchase healthcare

goods and services is described below with respect to Figure 4. As described with respect to Figure 4, the point of service activity is completed upon settlement of the Adjudicated Settlement Transaction as a typical credit card transaction.

Upon settlement of the Adjudicated Settlement Transaction by the patient (*i.e.*, signature of the credit card receipt for the Adjudicated Settlement Transaction), at step 104 the Internet bank 16 functions as a credit card merchant bank and debits the cardholder's credit account 20 against the healthcare provider's payable via the credit card network 18, of which Internet bank 16 is a part. Assuming that the cardholder (patient) has sufficient credit, Internet bank 16 executes a direct deposit of funds into the healthcare provider's account at step 106, typically the next business day. The amount deposited is the cardholder's receivable (less the merchant bank's credit discount, which is set consistent with that charged to comparable merchants on standard VISA® transactions, for example). In other words, the healthcare provider 12 receives payment of that part of the healthcare transaction for which the patient is responsible (deductibles, copay, coinsurance, etc.). The record of this transaction is preferably available to the healthcare provider.

The Internet bank 16 then exchanges data with the third party payor (healthcare administrator or insurance company) 24 and the patient's employer at step 108 to update the appropriate databases (maintained by the third party payor 24) of the services rendered. All claim information, including the results of adjudication, is preferably sent to the third party payor 24 in a nightly batch. Likewise, all updated eligibility information 26 is preferably submitted from the third party payor 24 to the adjudication engine 22 in batch. In the case of some large employers where there is a second database of record (usually eligibility), there may be an additional exchange of information. The method of information exchange varies by third party payor; the primary protocols include EDI, direct SQL queries and updates, 3270 screen scraping, and FTP.

The Internet bank 16 then transfers the healthcare provider's payable from the third party payor's account 28 to a disbursement account ready for payment at step 110 using an ACH wire transfer, as appropriate. The Internet bank 16 then transfers at step 112 the third party payor's receivable (less a merchant credit discount) from the disbursement account of the Internet bank 16 using ACH wire transfer for distribution to the healthcare provider's bank account. In other words, the third party payor 24 transfer the portion of the Adjudicated Healthcare Transaction it is obligated to pay to the healthcare provider's account via the Internet bank 16 to complete payment. In accordance with the invention, this entire process may take place substantially instantaneously, although such transactions typically take a couple of days. In any case, the healthcare provider 12 is paid much sooner than in conventional payment systems, and without the administrative overhead typically required. Also, a record of the payment is available to the healthcare provider 12.

Finally, at step 114, the Internet bank 16 sends the cardholder a unified credit card and explanation of benefits (EOB) statement at the end of the current credit cycle. Figures 5 and 6 together illustrate a credit card statement (Figure 5) and an explanation of benefits (EOB) statement (Figure 6) for a cobranded healthcare/credit card account used to access the payment system of the invention. As illustrated, the credit card statement is conventional except that healthcare transactions are separated out and explained in an EOB statement for each family member covered by the healthcare policy and credit card. In this fashion, the cardholder obtains a monthly statement which neatly ties medical transactions to their related credit card transactions, thus providing a complete record of services performed which can readily be maintained as a healthcare record for the patient and a record of payment for federal income tax purposes.

Those skilled in the art will appreciate that the payment system and process of the invention introduces a concept to the healthcare industry that exists in just about

every other industry: payment in full at the point of service. Because claims are adjudicated in real-time, the healthcare provider and cardholder (patient) both know at the completion of the service or purchase of the product who owes what based on the Adjudicated Settlement Transaction. In other words, a conventional healthcare transaction is broken down into the following:

Invoiced Amount - Disallowed Amount = Provider Receivable = Patient Payable + Third Party Payor Payable.

The Invoiced Amount is typically the amount desired by the healthcare provider, not the amount expected or allowed. The Disallowed Amount is the difference between the Invoiced Amount what the healthcare provider is contractually permitted to charge for a service, which varies by any combination of healthcare administrator, employer, network, and policy provision. Provider Receivable, on the other hand, is the payment for service a healthcare provider can legally expect after adjudication, while the Patient Payable is the portion of the payable that is assigned to the patient and can be any combination of co-pay, co-insurance, deductible, and uninsured services. Finally, the Third Party Payor Payable is the benefit paid to the healthcare provider on behalf of the patient. The adjudicated third party payment system 10 of the invention permits these variables to be resolved at the point of service rather than weeks later as in the conventional payment systems.

As noted above, Figure 4 illustrates a flow diagram of the point of service activity by a healthcare provider when using the payment system of the invention for payment of the healthcare provider. As will be apparent to those skilled in the art, this method permits costs to the patient to be considered at the time treatment decisions are made, rather than long after the treatment has been provided.

Step 1: The Cardholder goes to the Healthcare Provider's Office

At step 200, the cardholder or any member of his or her covered family in need of medical assistance goes to the healthcare provider's Office. The visit can be an appointment, a walk-in, or an emergency, but in any case, the cobranded healthcare access card is accepted for payment. The rules of engagement regarding referrals, primary care physicians, and the like vary in accordance with the cardholder's health insurance policy. Prior to visiting the healthcare provider, the cardholder can access the Internet bank's web site to access a member services application which offers options such as selection of primary care physician, provider search, prescription ordering, review of past medical transaction, an on-line policy manual, and the like.

Step 2: First Point of Contact

Upon arrival at the healthcare provider's office, the cardholder presents the cobranded payment system access card. At this point (step 202), the receptionist or other administrator has several options:

1. Accept the card in "default mode," where the payment system access card operates as any other healthcare access card in terms of eligibility verification and selection of the payment vehicle (if the provider accepts VISA®, the co-pay amount could be settled using the payment system access card.)

2. Use the payment system access card to access the Internet bank's web site to verify patient eligibility.

3. Use the payment system access card to verify eligibility and accept the co-pay amount.

4. Use the payment system access card to verify eligibility, accept the co-pay amount and file a claim.

In any of these cases, whether in or out of network, both the healthcare provider 12 and the cardholder have several options available to them. For example, a member of the healthcare provider's administrative staff may log onto the Internet bank's web site to verify eligibility. By entering

the Internet bank's domain name into an Internet browser or by swiping the cobranded payment system access card through a magstripe reader, the eligibility of the cardholder or any member of the cardholder's immediate family who has been identified as the patient may be determined. If the patient is eligible (insured), the person accessing the web site progresses to the next step in the process. However, if the patient is ineligible (uninsured), the person accessing the web site can inquire about and/or correct any discrepancies (*e.g.*, a new born not yet added to policy, or a new employee with misspelled name, etc.) and then request service once the problem is cleared up. In either case, the patient and the healthcare provider 12 are apprised of the status of eligibility of the patient's healthcare coverage prior to the rendering of services.

Thus, in the broadest sense, step 202 allows the healthcare provider 12 to verify that a policy is in force before services are performed. This step also allows the healthcare provider 12 to determine before services are rendered whether certain services are not covered, have severely limited coverage, require a referring physician, or may only be available within a certain network of healthcare providers. In this manner, the issues which often lead to payment problems can be identified *before* any services are provided rather than at the time of adjudication, thereby preventing the cardholder from taking on undesired financial liability and the healthcare provider 12 from being exposed to potential financial losses from bad debt. Such comprehensive eligibility checks and preadjudication services allows the healthcare providers and patients to get a thorough understanding of what services are covered, and to what degree, before any financial obligations are generated. Such financial accountability is missing from the current healthcare system in most instances.

Also, preadjudication at step 202 allows the Internet server of the Internet bank 16 to collect the necessary information (*e.g.*, healthcare provider ID to establish

effective contract and the Patient ID to establish policy profile) needed to adjudicate the claim. At this point, the initial stage of the claim has been established and the Internet bank 16 may start building a coverage profile while waiting for more information.

Step 3: Healthcare Provider examines patient and derives a preliminary diagnosis

Based on the patient's input and the healthcare provider's examination at step 204, a preliminary diagnosis can be reached. At this point the healthcare provider 12 has a new option available. Using the adjudicated third party payment system 10 of the invention, the healthcare provider 12 can enter preliminary diagnosis information and receive the patient's coverage profile from the Internet bank's web site. This feature enables both the healthcare provider 12 and the patient to consider options with an understanding of which treatments would be covered by the patient's policy, thereby minimizing financial risk.

Step 4 (Optional): Healthcare Provider enters preliminary diagnosis into claim application

At step 206, using the healthcare provider's Internet browser (*e.g.*, MS Internet Explorer 4.0, Netscape Navigator 4.0, etc.) the staff member can access the Internet bank's web site and enter the patient's preliminary diagnosis data to begin the claims submission process. This step can be a continuation of the session previously established in step 202 (the verification of patient eligibility) or it can be a new session. In either case, the Internet server of the Internet bank 16 maintains the integrity of the session for the user.

Step 5 (Optional): Based on preliminary diagnosis the patient's coverage profile is returned

Once the preliminary diagnosis information has been entered at step 206, the patient's coverage profile may be returned at step 208. The coverage profile identifies which treatments are covered based on the insured's policy as well as all patient medical history that is available. This resource assists the healthcare provider 12 during the

consultation with the patient about possible treatments options for the diagnosed medical problem.

This step is optional and is not required for auto-adjudication of the patient's claim. However, it is beneficial for satisfaction of both the healthcare provider's and the patient's concerns about how the payment for services will be managed.

Step 6 (Optional): Healthcare Provider consults with patient and delivers treatment

With the patient's coverage profile in hand, the healthcare provider 12 is able to consult with the patient and determine the type of treatment best suited to the patient's needs both physically and financially at step 210. The result of this provider and patient dialog is the best possible care for the patient. Of course, the healthcare provider 12 and patient may elect to return to the preadjudication interface for additional information as additional treatments are indicated.

This step is also optional, for the healthcare provider 12 is not required to use the patient's coverage profile to determine a course of treatment for the patient or to receive the auto-adjudication benefits. Rather, the emphasis is on maintaining the healthcare provider's autonomy.

Step 7 (Optional): Healthcare Provider's staff submits on-line claim through Internet

Once treatment has been provided, it is time to pay the bill. The adjudicated third party payment system 10 of the invention enables the healthcare provider 12 to enter a claim and interactively adjudicate that claim on-line using the Internet at step 212. This interactive session aids the user in entering correct data, which facilitates the auto-adjudication process, and therefore, increases the number of claims that may be auto-adjudicated. Of course, a certain percentage of claims will not be able to be auto-adjudicated. For those claims, the healthcare provider 12 may monitor the progress of those claims that must be manually adjudicated.

This step is optional because the healthcare provider

12 can file claims via traditional means and still receive most of the benefits. For example, healthcare providers without Internet access can accept the cobranded payment system access card and use it in its "default mode" to access the credit card payment system via the phone lines.

Generally, there are many conventional ways for the healthcare provider to generate the healthcare transaction or claim for adjudication. The healthcare provider 12 may have practice administration software of the type described in the background of the application which includes claim data entry and submission through a claims processor. Typically, the healthcare provider 12 fills out the claim on a paper form such as the HCFA 1500 and sends it to the administrator's claim center. In accordance with the invention, the claim submission process is corrected by providing live data validation and screening via an Interactive Claim Submission (ICS) interface at the Internet bank's web site. To maintain security, the web site may include a web applet that uses, for example, VISA®'s SET security program. Typically, the healthcare provider 12 will have provided a preadjudicated claim as described above. If so, the preadjudicated claim receives final edits and is submitted by the healthcare provider 12. Alternately, an electronic claim may be started from scratch for submission. In either case, the claim is clean and error free at the time of submission, and accordingly, more likely to be in the proper form for adjudication by the adjudication engine 22. For example, preadjudication identifies improper CPT codes for the patient's policy.

Step 8 (Optional): The claim is adjudicated and a settlement transaction is transmitted to the Healthcare Provider

At step 214, the claim submitted by the healthcare provider 12 is adjudicated and either a request for more information or an Adjudicated Settlement Transaction in the form of a credit card receipt is transmitted back to the healthcare provider 12. This interactive session enables the healthcare provider's staff to use the adjudication engine 22

to ascertain that the settlement is correct.

The adjudication process includes verifying eligibility, optimizing claim data to minimize financial exposure, verifying policy compliance (*e.g.*, dental is covered), checking timing constraints (*e.g.*, one well care visit per year), determining in-network versus out-of-network status, determining contracted and/or URC fees, determining provider allowed amount, patient responsibility, and the payable third party payor coverage amount. In accordance with the invention, the adjudication engine 22 adjudicates claims substantially in real-time. In many cases, the adjudication is completed within seconds of an Interactive Claim Submission, although, as noted above, the adjudication may be handled in batch form and settlement reached within a day or two.

A simple example of an Adjudicated Settlement Transaction is illustrated in Figure 7. As illustrated, the Adjudicated Settlement Transaction identifies the amount 44 of the healthcare transaction to be paid by the patient and the amount 46 of the healthcare transaction to be paid by the third party payor 24.

Step 9: Cardholder reviews and settles Healthcare Bill

At step 216, the cardholder reviews his or her bill and authorizes how settlement of the charges should be handled. This final step assures the cardholder that no fees can be placed on the credit card without the cardholder's written consent. The cobranded payment system access card then functions just as any other payment card. However, by using the payment system access card to settle the cardholder's healthcare bill, the cardholder may earn "Deductible Dollars™" towards their next healthcare expense and also benefit from the receipt of the comprehensive statements illustrated in Figures 5 and 6.

Figure 8 illustrates the life cycle of a claim submitted by a healthcare provider for processing using the adjudicated third party payment system 10 of the invention. As illustrated, the first step 1.1 is to accept a claim from

the healthcare provider 12. Preferably, the claim is generated by completing a HCFA 1500 form and submitting the claim electronically for acceptance or rejection. The healthcare provider 12 may edit the claim to check eligibility, to validate incidents, and to validate the diagnosis. The payment system access card is preferably validated by checking its number and expiration date and is rejected if invalid. The healthcare provider 12 may also be validated by providing an ID and password from the healthcare provider 12 whereby the healthcare provider 12 is rejected if either value is invalid. A mechanism may also be provided for signing up a new healthcare provider 12.

Once a claim is accepted, it is adjudicated at step 1.2. As noted above with respect to Figure 2, to adjudicate the claim, the rules processor 30 performs tasks such as checking domain completeness, where the domain includes incident data and diagnosis data, and writing the results to a decision matrix of rules processor 30. The procedures are also checked against the patient's policy coverage parameters. For example, the policy is checked for outright exclusions and temporal constraints, and allowance is made for the framework (toxics, trauma, etc.). In addition, indicators, prior outcomes, and the diagnosis are referenced against the procedures, and the results are again written to the decision matrix of the rules processor 30. Contractual constraints are also evaluated to determine network status (in or out) and referral status (obtained and timely), and the results are written to the decision matrix of the rules processor 30. Adjudication engine 22 also determines pricing by selecting the contract amounts and the URC amounts.

The decision matrix is then evaluated to determine whether the claim is valid or invalid. If the claim is invalid, it is sent to the Policy Administrator for adjudication at step 1.3. On the other hand, if the claim is valid, then the adjudication engine 22 allocates financial responsibility for the claim by determining the amount allowed to the healthcare provider for the claim, determining the

amount covered by the Policy Administrator (third party payor), and determining the patient's responsibility by allocating the policy deductible(s), co-pay, co-insurance, and any uncovered amounts. Finally, the Adjudicated Healthcare Settlement Transaction is built at step 1.5 and posted to the settlement queue.

As noted above, any unadjudicable claims are sent to the Policy Administrator for adjudication at step 1.3. The claim is then converted to EDI submission format and transmitted via EDI for manual external adjudication. At step 1.4, the externally adjudicated claim is received as an EDI transmission from the Policy Administrator. The claim is then validated and the results of the adjudication are analyzed to infer any new rules for updating of the adjudication rules. The Adjudicated Healthcare Settlement Transaction is then built at step 1.5 and posted to the settlement queue.

At step 1.5, the Adjudicated Healthcare Settlement Transaction is generated. In this step, the adjudicated claim is identified, and the claim is checked using conventional credit card fraud detection systems to determine if it is fraudulent. If it is determined that the claim is fraudulent, then a Fraud Transaction is generated and the fraud record is posted to a fraud file and a fraud alert is generated at step 1.10 and sent to a fraud unit.

Once the Adjudicated Healthcare Settlement Transaction is generated at step 1.5, the step of remitting the healthcare provider is performed at step 1.6. In particular, the settlement transactions for the healthcare provider are selected and the settlement amounts to payable are summarized. The payable is then posted to a ledger, and an EDI record is generated for ACH payment. The EDI record is transmitted to the healthcare provider's bank, and a payment confirmation from the healthcare provider's bank is received. At this time, the payable is closed as well as the settlement transactions. The credit discount record is then posted to the ledger account of the Internet bank 16.

Next, a remittance from the Policy Administrator is

requested at step 1.8. In particular, settlement transactions are selected for the Policy Administrator and the transactions are summarized into a receivable record. The receivable record is then posted to the ledger. The receivable is preferably collected from the Policy Administrator using an automated invoice method in which an EDI transaction is generated for ACH payment, an EDI transaction is sent to the Policy Administrator's bank, and payment confirmation is received from the Policy Administrator's bank. On the other hand, a manual invoice method may be used where the invoice is printed and mailed, manual payment is received and posted, and the payment is deposited in the Internet bank 16. Finally, the receivables and the settlement transactions are closed.

The cardholder (patient) is then billed at step 1.9. A cardholder's EOB is created and a credit card statement is generated which integrates the credit card and EOB data into a Healthcare Settlement Statement. The Healthcare Settlement Statement is then mailed and the Healthcare Settlement Statement file is posted to the cardholder's account. The EOB mail date is also provided to the Policy Administrator for its records.

It is contemplated that the payment system access card also may be used to charge the payment (credit) account of the cardholder by the entire amount of the adjudicated settlement amount and later crediting the payment account by remittance from the Policy Administrator rather than completely separating the amounts at the point of service. In this fashion, "Deductible Dollars™" may be obtained much faster. Of course, the Policy Administrator's payment portion and the patient's payment portion may be handled completely separately at the point of service, as desired.

Those skilled in the art will appreciate that the system of the invention allows the Internet bank 16 to become the sole source of receivables for the service provider 12. This is a substantial improvement over the present healthcare model where there are thousands of cardholders and dozens of healthcare administrators (third party payors), all of whom can

have receivable entries, most of which are not adjudicated for weeks after point of service. Also, the third party adjudicated payment system of the invention allows the Internet bank 16 to become the agent for distributing the cobranded payment cards through employers, adjudicating and paying claims, and disbursing payables. This eliminates three large cost centers: card fulfillment, manual claims adjudication, and accounts payable. The healthcare administrator (third party payor) 24 becomes free to do what is profitable: sell and underwrite insurance policies. In addition, as both the merchant bank and the credit card issuing bank, the Internet bank 16 may reduce the costs of credit.

It will be appreciated by those skilled in the art that even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and function of the invention, the disclosure is illustrative only and numerous alternate embodiments are possible without departing from the novel teachings of the invention. For example, the adjudication engine of the invention need not be Internet based but may be accessed by a direct dial call via the telephone lines. Also, the payment system access card could be replaced by a smart card, so long as suitable security measures could be incorporated into the smart card. These and other modifications may be made in detail within the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

We claim:

1. A point of service third party adjudicated payment system, comprising:

a point of service terminal which accepts a payment system access card for payment for a purchase of at least one of a service and product by a customer, at least part of said purchase being reimbursable by a third party payor, and which creates a purchase transaction;

an adjudication engine which processes said purchase transaction so as to adjudicate substantially in real-time a first portion of said purchase which is to be paid by the third party payor and a second portion of said purchase which is to be paid by the customer and returns an adjudicated settlement transaction to said point of service terminal designating at least said first portion and said second portion; and

a payment system which transfers funds in accordance with said adjudicated settlement transaction whereby the third party payor is debited by said first portion and the point of service provider is paid said first portion and a payment account accessible by said payment system access card is charged at least said second portion and the point of service provider is paid said second portion.

2. A system as in claim 1, wherein said adjudication engine is connected to a node on the Internet and said point of service terminal accesses said adjudication engine via an Internet connection to said node.

3. A system as in claim 1, wherein said adjudication engine includes a data driven rules engine which processes data from the customer, the point of service provider, the third party payor, and the payment system to determine the first portion of the payment to be paid by the third party payor.

4. A system as in claim 1, wherein said payment

system access card is one of a credit card, debit card, and purchase card, said payment system includes a credit card network, and said adjudicated settlement transaction is formatted as a credit card transaction for said credit card network.

5. A system as in claim 4, wherein said purchase transaction includes at least one of product and service codes which said adjudication engine compares to payment parameters and conditions from the third party payor to determine the value of said first portion of said purchase to be paid by the third party payor.

6. A system as in claim 5, wherein the point of service provider is a healthcare provider and said payment parameters and conditions are determined by a healthcare policy between the customer's employer and the third party payor.

7. A system as in claim 6, wherein said payment system access card is cobranded so as to include an account number for said credit card network and said healthcare policy.

8. A method of providing third party adjudicated payment at a point of service, comprising the steps of:

providing a payment system access card to a point of service provider for payment for a purchase of at least one of a service and product by a customer, at least part of said purchase being reimbursable by a third party payor;

transmitting a purchase transaction to an adjudication engine for processing;

said adjudication engine adjudicating said purchase transaction substantially in real-time so as to determine a first portion of said purchase which is to be paid by the third party payor and a second portion of said purchase which is to be paid by the customer;

said adjudication engine returning an adjudicated settlement transaction to said point of service designating at

least said first portion and said second portion; and

transferring funds in accordance with said adjudicated settlement transaction whereby the third party payor is debited by said first portion and the point of service provider is paid said first portion and a payment account accessible by said payment system access card is charged at least said second portion and the point of service provider is paid said second portion.

9. A method as in claim 8, wherein said transferring step comprises the steps of charging said payment account by said first and second portions and crediting said payment account by said first portion.

10. A method as in claim 8, wherein said transferring step comprises the steps of debiting the third party payor by said first portion, paying the point of service provider said first portion, charging said payment account by at least said second portion, and paying the point of service provider said second portion.

11. A method as in claim 8, wherein said adjudication engine is connected to a node on the Internet and said transmitting step comprises the step of providing an Internet connection to said node.

12. A method as in claim 8, wherein said payment system access card is one of a credit card, a debit card, and a purchase card, and said funds transferring step comprises the steps of formatting said adjudicated settlement transaction as a credit card transaction and processing said adjudicated settlement transaction in a credit card network.

13. A method as in claim 6, wherein said adjudicating step comprises the step of comparing at least one of product and service codes in said purchase transaction to payment parameters and conditions from the third party payor

to determine the value of said first portion of said purchase to be paid by the third party payor.

14. A method of providing adjudicated payment of reimbursable healthcare costs to a healthcare provider at a point of service of a patient, comprising the steps of:

providing a payment system access card to the healthcare provider at said point of service for payment for a purchase of at least one of healthcare products and services by the patient, at least part of said purchase being reimbursable by a third party payor;

transmitting a purchase transaction to an adjudication engine for processing;

said adjudication engine adjudicating said purchase transaction substantially in real-time so as to determine a first portion of said purchase which is to be paid by the third party payor and a second portion of said purchase which is to be paid by the patient;

said adjudication engine returning an adjudicated settlement transaction to said point of service designating at least said first portion and said second portion; and

transferring funds in accordance with said adjudicated settlement transaction whereby the third party payor is debited by said first portion and the healthcare provider is paid said first portion and a payment account accessible by said payment system access card is charged at least said second portion and the healthcare provider is paid said second portion.

15. A method as in claim 14, wherein said adjudication engine is connected to a node on the Internet and said transmitting step comprises the step of providing an Internet connection to said node.

16. A method as in claim 14, wherein said payment system access card is cobranded so as to include an account number for a credit card network and a healthcare policy

between the patient's employer and the third party payor, and said funds transferring step comprises the steps of formatting said adjudicated settlement transaction as a credit card transaction and processing said adjudicated settlement transaction in said credit card network.

17. A method as in claim 16, wherein said adjudicating step comprises the step of comparing at least one of product and service codes in said purchase transaction to payment parameters and conditions from the third party payor to determine the value of said first portion of said purchase to be paid by the third party payor, whereby said payment parameters and conditions are determined by said healthcare policy.

18. A method as in claim 14, wherein said funds transferring step comprises the steps of charging said payment account by said first and second portions and crediting said payment account by said first portion.

19. A method as in claim 14, wherein said funds transferring step comprises the steps of debiting the third party payor by said first portion, paying the healthcare provider said first portion, charging said payment account by at least said second portion, and paying the healthcare provider said second portion.

20. A method as in claim 14, wherein said payment system access card is provided to the healthcare provider in said providing step prior to provision of healthcare services, comprising the additional step of accessing said adjudication engine to verify patient eligibility for payment for services by the third party payor prior to provision of healthcare services by the healthcare provider.

21. A method as in claim 20, comprising the additional steps of providing a coverage profile for the

patient to the healthcare provider and comparing a preliminary diagnosis for healthcare services to be provided to the patient to said coverage profile prior to providing healthcare services to the patient.

22. A method of converting a healthcare transaction into a credit card transaction for payment by a patient, comprising the steps of:

transmitting at least one of healthcare product and service codes for healthcare products and services purchased by the patient from a healthcare provider at a point of service to an adjudication engine for processing;

said adjudication engine adjudicating said product and service codes substantially in real-time so as to determine a first portion of said purchased healthcare products and services which is to be paid by a third party payor and a second portion of said purchased healthcare services which is to be paid by the patient;

said adjudication engine returning an adjudicated settlement transaction to said point of service designating at least said first portion and said second portion;

formatting said adjudicated settlement transaction as a credit card transaction at said point of service; and

processing said formatted adjudicated settlement transaction in a credit card network for payment.

23. A method as in claim 22, wherein said credit card network is accessed in said processing step using a payment system access card including one of a credit card, a debit card, and a purchase card, and said payment system access card is cobranded so as to include an account number for said credit card network and a healthcare policy between the patient's employer and said third party payor, whereby said processing step comprises the step of using said account number to access said credit card network.

ABSTRACT

A point of service third party adjudicated payment system and method which provides for the creation of an adjudicated settlement transaction at a point of service which designates the portion of the service to be paid by the third party payor and the portion to be paid by the customer. The system includes a point of service terminal which accepts a payment system access card, such as a credit card, debit card, or purchase card, for payment for a purchase of a service and/or product by a customer, where at least part of the purchase is reimbursable by a third party payor. The point of service terminal creates a purchase transaction which is adjudicated by an adjudication engine substantially in real-time (at the time of service or in a purchase transaction processing batch) to determine a first portion of the purchase which is to be paid by the third party payor and a second portion of the purchase which is to be paid by the customer. An adjudicated settlement transaction is returned to the point of service terminal designating at least the first portion and the second portion for payment. The payment system access card provides access to a payment system which transfers funds in accordance with the adjudicated settlement transaction whereby the third party payor is debited by the first portion and the point of service provider is paid the first portion and a payment account accessible by the payment system access card is charged at least the second portion and the point of service provider is paid the second portion as with typical payment card transactions.

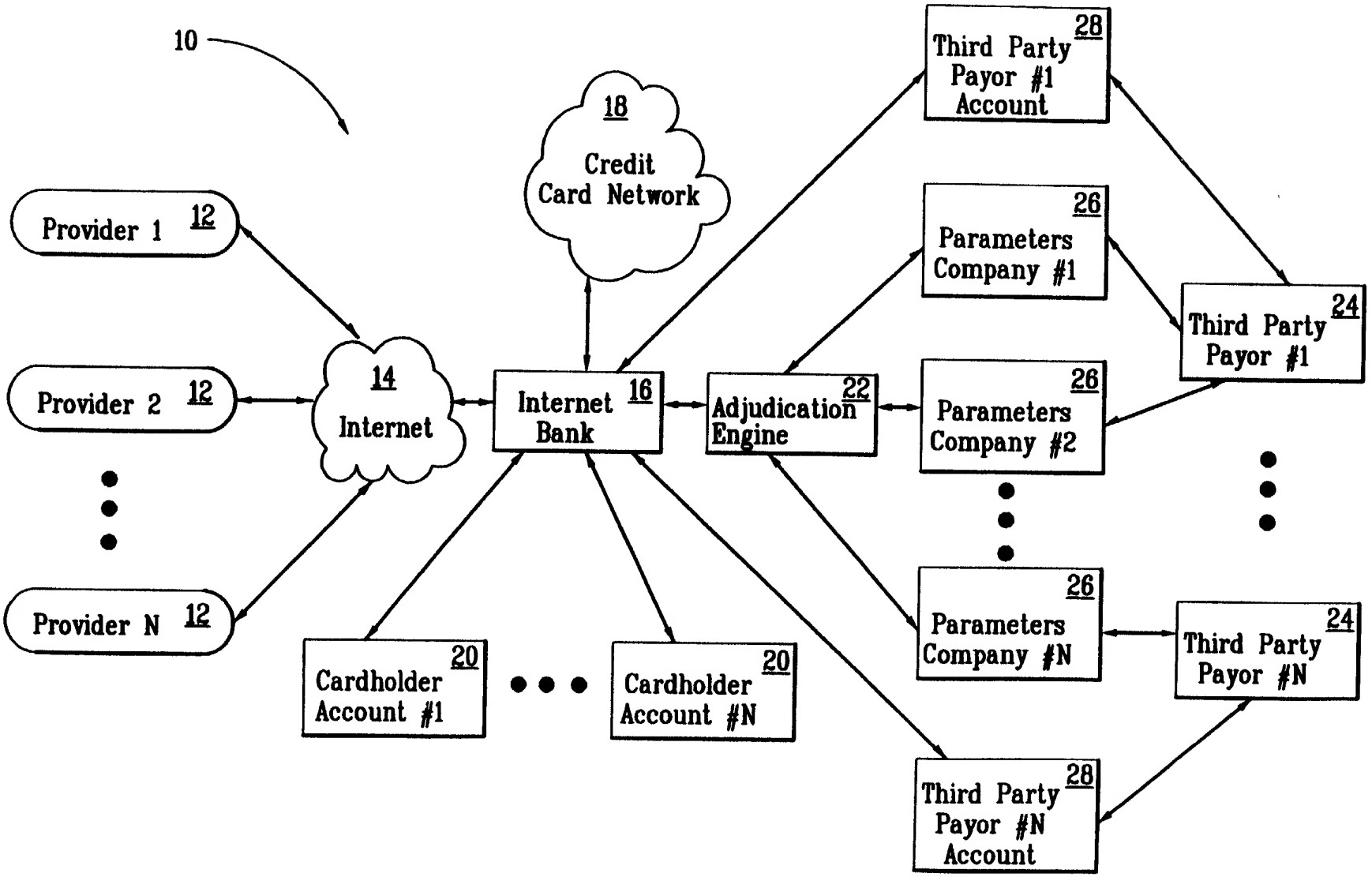

FIG. 1

FIG. 2

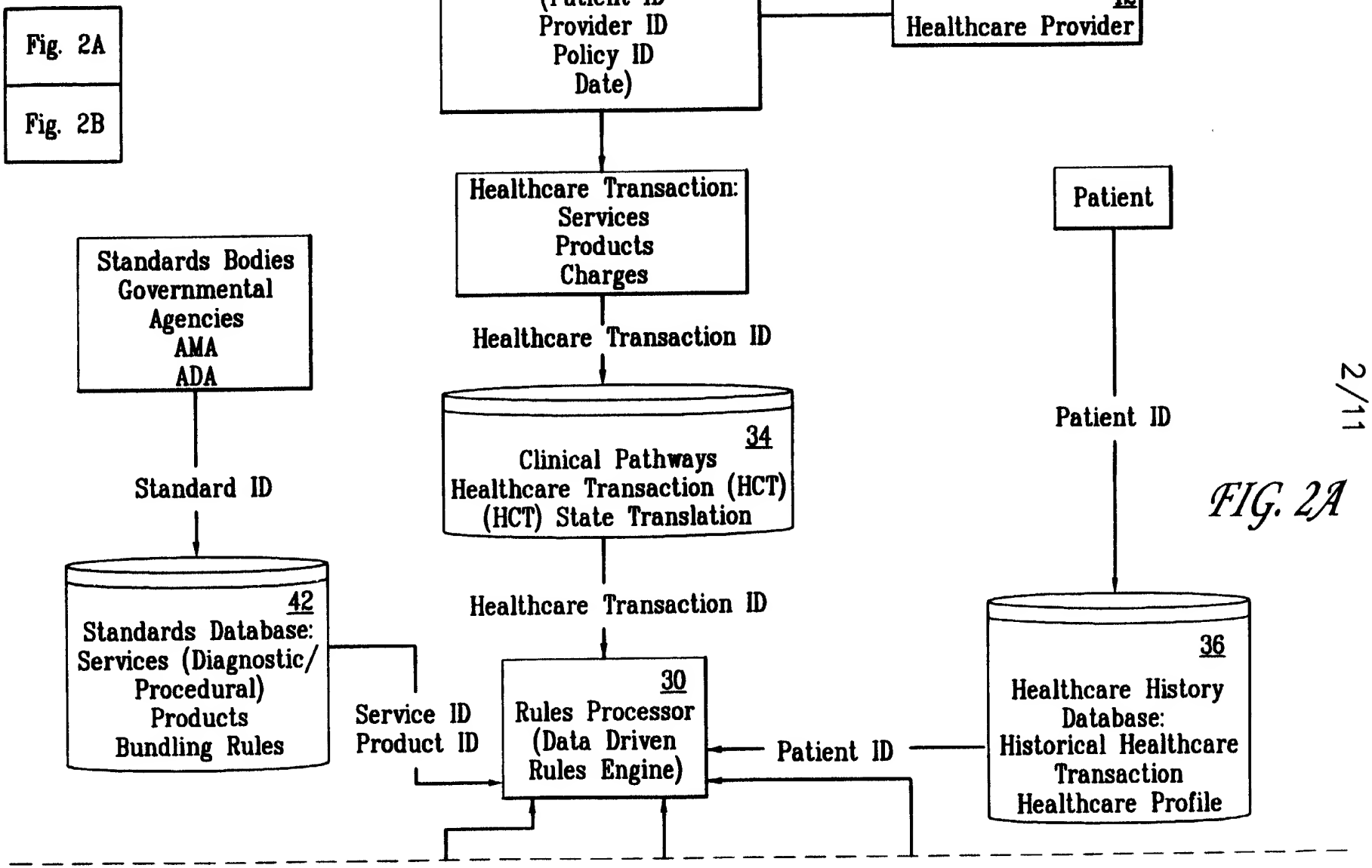
Fig. 2A
Fig. 2B
Healthcare Transaction ID:
(Patient ID
Provider ID
Policy ID
Date)
12
Healthcare Provider
Healthcare Transaction:
Services
Products
Charges
Patient
Standards Bodies
Governmental
Agencies
AMA
ADA
Healthcare Transaction ID
Patient ID
34
Clinical Pathways
Healthcare Transaction (HCT)
(HCT) State Translation
Standard ID
42
Standards Database:
Services (Diagnostic/
Procedural)
Products
Bundling Rules
Healthcare Transaction ID
36
Healthcare History
Database:
Historical Healthcare
Transaction
Healthcare Profile
Service ID
Product ID
30
Rules Processor
(Data Driven
Rules Engine)
Patient ID

FIG. 2A

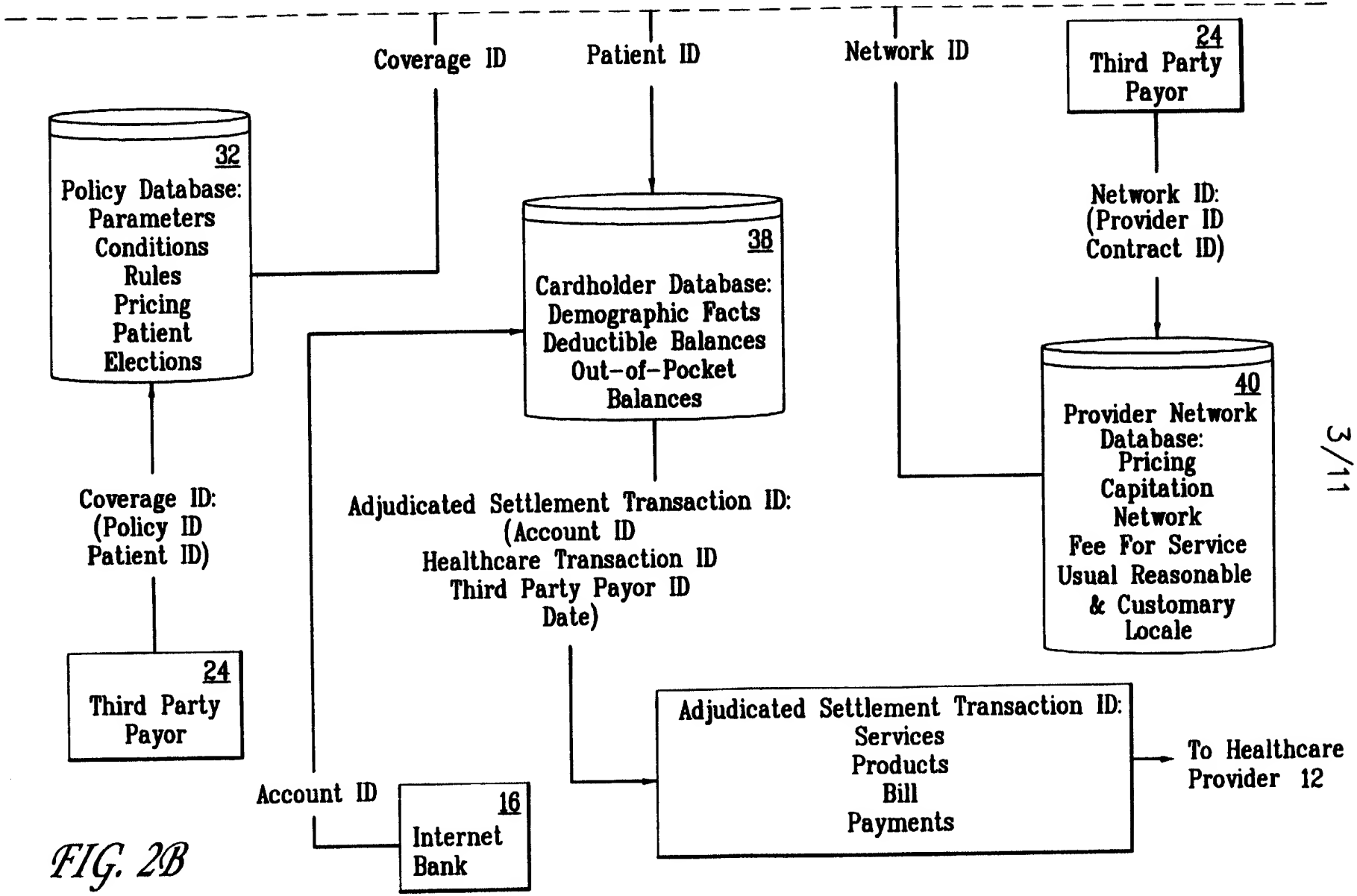
Coverage ID
Patient ID
Network ID
24
Third Party Payor
32
Policy Database:
Parameters
Conditions
Rules
Pricing
Patient
Elections
38
Cardholder Database:
Demographic Facts
Deductible Balances
Out-of-Pocket
Balances
Network ID:
(Provider ID
Contract ID)
40
Provider Network Database:
Pricing
Capitation
Network
Fee For Service
Usual Reasonable
& Customary
Locale
Coverage ID:
(Policy ID
Patient ID)
Adjudicated Settlement Transaction ID:
(Account ID
Healthcare Transaction ID
Third Party Payor ID
Date)
24
Third Party Payor
Account ID
16
Internet Bank
Adjudicated Settlement Transaction ID:
Services
Products
Bill
Payments
To Healthcare Provider 12

FIG. 2B

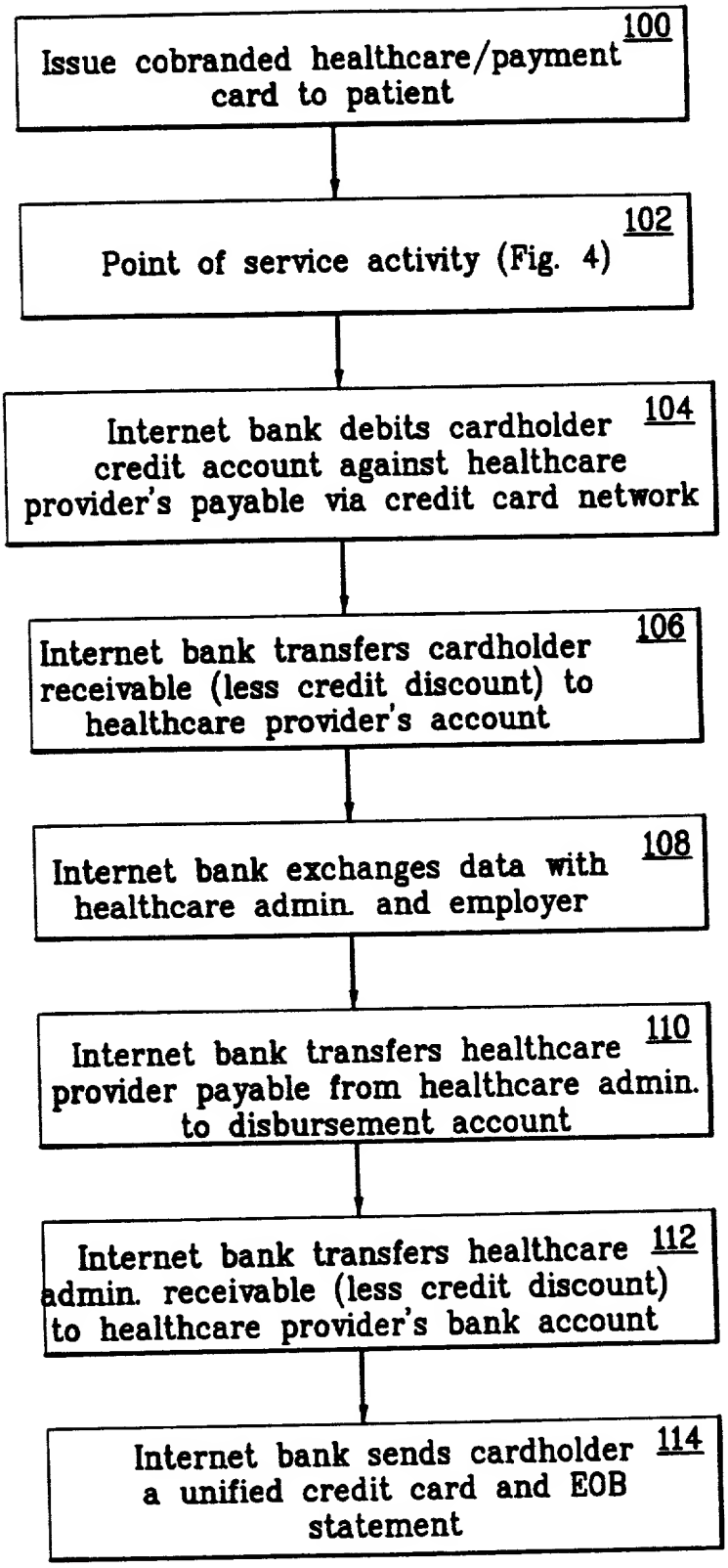
Issue cobranded healthcare/payment card to patient
100
Point of service activity (Fig. 4)
102
Internet bank debits cardholder credit account against healthcare provider's payable via credit card network
104
Internet bank transfers cardholder receivable (less credit discount) to healthcare provider's account
106
Internet bank exchanges data with healthcare admin. and employer
108
Internet bank transfers healthcare provider payable from healthcare admin. to disbursement account
110
Internet bank transfers healthcare admin. receivable (less credit discount) to healthcare provider's bank account
112
Internet bank sends cardholder a unified credit card and EOB statement
114

FIG. 3

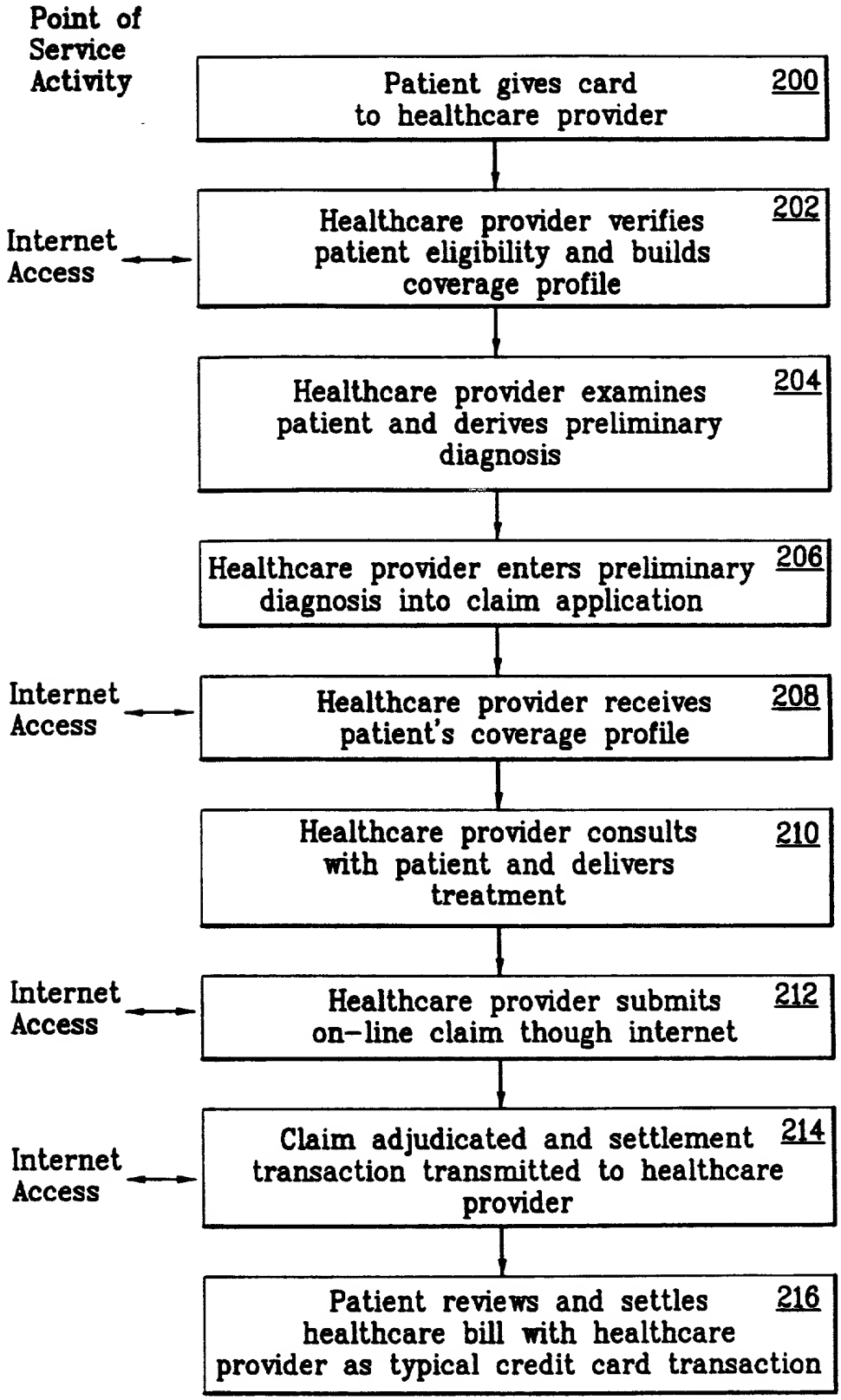
Point of Service Activity
Patient gives card to healthcare provider
200
Internet Access
Healthcare provider verifies patient eligibility and builds coverage profile
202
Healthcare provider examines patient and derives preliminary diagnosis
204
Healthcare provider enters preliminary diagnosis into claim application
206
Internet Access
Healthcare provider receives patient's coverage profile
208
Healthcare provider consults with patient and delivers treatment
210
Internet Access
Healthcare provider submits on-line claim though internet
212
Internet Access
Claim adjudicated and settlement transaction transmitted to healthcare provider
214
Patient reviews and settles healthcare bill with healthcare provider as typical credit card transaction
216

FIG. 4

ACCOUNT NUMBER	CREDIT LIMIT	AVAILABLE CREDIT	PURCHASES DOLLARS	PURCHASES BALANCE	CASH ADV BALANCE	PREVIOUS BALANCE	DAYS THIS BILLING CYCLE	CYCLE START DATE	CYCLE END DATE	PAYMENT DUE DATE
9943-0392-1562-4711	8000	901	83	2654	1045	3388	29	10/23/1997	11/20/1997	12/10/1997

TRANS. DATE	POSTING DATE	REFERENCE NUMBER	DESCRIPTION OF ACTIVITY		AMOUNT
			MEDICAL TRANSACTIONS		
24-Oct	24-Oct	1032	KLEIN, EDWARD, MD	CLAIM# 9710241335435-560229 (SEE ATTACHED)	640.00
24-Oct	24-Oct	1033	CIGNA HEALTHCARE PAYMENT	CLAIM# 9710241335435-560229 (SEE ATTACHED)	(448.00)
6-Nov	6-Nov	1034	KLEIN, EDWARD, MD	CLAIM# 9711080398432-483984 (SEE ATTACHED)	350.00
6-Nov	6-Nov	1035	CIGNA HEALTHCARE PAYMENT	CLAIM# 9711080398432-483984 (SEE ATTACHED)	(256.00)
8-Nov	8-Nov	1036	DR. MORGENSTERN, DDS	CLAIM# 9711014930293-839434 (SEE ATTACHED)	350.00
10-Nov	10-Nov	1037	WANG, GEORGE, MD	CLAIM# 9711100948372-583943 (SEE ATTACHED)	15.00
14-Nov	14-Nov	1038	HIGHTSTOWN PEDIATRICS		10.00
15-Nov	15-Nov	1039	WINDSOR PODIATRY		10.00
			SUBTOTAL MEDICAL TRANSACTIONS	671.00	
			STANDARD PURCHASES		
5-Nov	5-Nov	1040	FEDEX AB#801-520301683TN		12.00
6-Nov	6-Nov	1041	AT&T WORLDNET SERVICES		19.95
6-Nov	6-Nov	1042	BOYDS		745.00
6-Nov	6-Nov	1043	BEST BUY		1015.96
10-Nov	10-Nov	1044	HOME DEPOT		237.54
10-Nov	10-Nov	1045	AOL SERVICE 1197		19.95
11-Nov	11-Nov	1046	STAPLES #140		173.40
14-Nov	14-Nov	1047	PROGRAMMERS SUPER SHOP		701.00
18-Nov	18-Nov	1048	COMPAQ COMPUTERS		297.24
19-Nov	19-Nov	1049	SNEAKER STADIUM		45.60
			SUBTOTAL STANDARD PURCHASES	3267.64	
			CASH ADVANCES		
4-Nov	4-Nov	1050	MAC RT 571 & RT 130		300.00
			SUBTOTAL CASH ADVANCES	300.00	
			ACCOUNT TRANSACTIONS		
20-Nov	20-Nov	1051	FINANCE CHARGE ON MEDICAL PURCHASES		22.43
20-Nov	20-Nov	1052	FINANCE CHARGE ON CASH ADVANCES		14.98
20-Nov	20-Nov	1053	FINANCE CHARGE ON STANDARD PURCHASES		59.82
20-Nov	20-Nov	1054	REFUND OF OVERCHARGE TRAN# 0997 ON 9/12/97		(42.41)
			SUBTOTAL ACCOUNT TRANSACTIONS	54.82	
			PAYMENT(S)		
1-Nov	1-Nov	1055	PAYMENT THANK YOU		(500.00)
6-Nov	6-Nov	1056	PAYMENT THANK YOU		(2000.00)
12-Nov	12-Nov	1057	PAYMENT THANK YOU		(1500.00)
19-Nov	19-Nov	1058	PAYMENT THANK YOU		(1000.00)
			SUBTOTAL PAYMENT(S)	(5000.00)	

ACCOUNT SUMMARY		
PREVIOUS BALANCE		7791.80
MEDICAL PURCHASES	+	1375.00
CASH ADVANCES	+	300.00
STANDARD PURCHASES	+	2566.64
CREDITS	-	42.41
PAYMENTS	-	5000.00
LATE CHARGES	+	0.00
FINANCE CHARGES	+	97.68
NEW BALANCE	=	7087.86

FIGURE 5

SUMMARY OF ACTIVITY

INSURED	DATE	DESCRIPTION	OWED	PAID ON VISA	POSSIBLY DUE	QUICK PAY #	NOTES
SAMANTHA SMITH (01)	10/14/97	KLEIN, EDWARD, MD	112.00	640.00			$80 OVERPAY
	10/15/97	PRINCETON MEDICAL CTR	110.00	0.00	110.00	405	
	10/30/97	KLEIN, EDWARD, MD	64.00	350.00			$30 OVERPAY
JOHN SMITH (02)	10/14/97	DR MORGENSTERN, DDS	350.00	350.00			
	10/29/97	WANG, GEORGE, MD	140.00	15.00	125.00	406	

EXPLANATION OF BENEFITS

DATE OF SERVICE	DESCRIPTION OF SERVICE	AMOUNT BILLED	AMOUNT ALLOWED	YOUR RESPONSIBILITY: DEDUCTIBLE	CO-INS.	CO-PAY	EXCLUDED EXPENSES	TOTAL	SEE NOTES	PAYMENT
SAMANTHA SMITH (01)										
CLAIM# 9710241335435-560229		**KLEIN, EDWARD, MD**								
10/24/97	TELEPHONE CALL	50.00	0.00	0.00	0.00	0.00	0.00	0.00	1064	0.00
10/24/97	INITIAL CONSULT	75.00	75.00	0.00	15.00	0.00	0.00	15.00	2047	60.00
10/24/97	COLLECT VENOUS BLOOD	30.00	0.00	0.00	0.00	0.00	0.00	0.00	1034	0.00
10/24/97	PITUITARY GONADOTROP	85.00	85.00	0.00	17.00	0.00	0.00	17.00	2047	68.00
10/24/97	PITUITARY GONADOTROP	85.00	85.00	0.00	17.00	0.00	0.00	17.00	2047	68.00
10/24/97	RIA ASSAY OF ESTRADIOL	70.00	70.00	0.00	14.00	0.00	0.00	14.00	2047	56.00
10/24/97	ASSAY PROGESTERONE	70.00	70.00	0.00	14.00	0.00	0.00	14.00	2047	56.00
10/24/97	ECHOGRAPHY, TRANS	175.00	175.00	0.00	35.00	0.00	0.00	35.00	2047	140.00
CLAIM TOTAL		**640.00**	**560.00**	**0.00**	**112.00**	**0.00**	**0.00**	**112.00**		**448.00**
OHB VISA TRANSACTION 1032 ON 10/24/97								**640.00**		
CLAIM# 9710251685435-938273		**PRINCETON MEDICAL CENTER**								
10/25/97	OUT-PATIENT SERVICES	1292.82	550.00	0.00	110.00	0.00	0.00	110.00		440.00
CLAIM TOTAL		**1292.82**	**550.00**	**0.00**	**110.00**	**0.00**	**0.00**	**110.00**		**440.00**
CLAIM# 9711060398432-483984		**KLEIN, EDWARD, MD**								
11/08/97	OFFICE VISIT	75.00	75.00	0.00	15.00	0.00	0.00	15.00	2047	60.00
11/08/97	ECHOGRAPHY, TRANS	175.00	175.00	0.00	35.00	0.00	0.00	35.00	2047	140.00
11/08/97	ASSAY PROGESTERONE	70.00	70.00	0.00	14.00	0.00	0.00	14.00	2047	56.00
11/08/97	COLLECT VENOUS BLOOD	30.00	0.00	0.00	0.00	0.00	0.00	0.00	1034	0.00
CLAIM TOTAL		**350.00**	**320.00**	**0.00**	**64.00**	**0.00**	**0.00**	**64.00**		**256.00**
OHB VISA TRANSACTION 1033 ON 11/08/97								**350.00**		
SAMANTHA'S TOTAL		**2282.82**	**1430.00**	**0.00**	**286.00**	**0.00**	**0.00**	**286.00**		**1144.00**
JOHN SMITH (02)										
CLAIM# 9711014930293-839434		**DR. MORGENSTERN, DDS**								
11/01/97	CROWN REPLACEMENT	1500.00	500.00	250.00	100.00	0.00	0.00	350.00		150.00
CLAIM TOTAL		**1500.00**	**500.00**	**250.00**	**100.00**	**0.00**	**0.00**	**350.00**		**150.00**
WWW.ONEHEALTHBANK.COM INTERNET VISA TRANSACTION 1034 ON 11/06/97								**350.00**		
CLAIM# 9711100948372-583943		**WANG, GEORGE, MD**								
11/10/97	OFFICE VISIST	80.00	75.00	0.00		15.00	0.00	15.00		60.00
11/10/97	RHYTHM ECG, TRACE	125.00	125.00	0.00		0.00	125.00	125.00		0.00
CLAIM TOTAL		**205.00**	**200.00**	**0.00**	**0.00**	**15.00**	**125.00**	**140.00**		**60.00**
OHB VISA TRANSACTION 1035 ON 11/10/97								**15.00**		
JOHN'S TOTAL		**1705.00**	**700.00**	**250.00**	**100.00**	**15.00**	**125.00**	**490.00**		**210.00**
FAMILY TOTAL		**3987.82**	**2130.00**	**250.00**	**386.00**	**15.00**	**125.00**	**776.00**		**1354.00**

FIGURE 6

Healthcare Provider Name and Address

Third Party Payor Name

Name	Swati Lele
Date	2/10/1998
Card Number	4332-3011-3020-001
Exparation Date	6/99
Authorization Code	234556

Transaction Date	Posting Date	CPT Code	CPT Description	Amount
02/10/1998	02/10/1998	09142	Consultation	500

Description	Amount
Services Rendered Charges	500
Lab Charges	100
Copay Charges	20
Total Charges	620
44 Amount paid by patient	20
46 Amount paid by insurer	600
Net Charges	0

Authorized Signature X

FIG. 7

FIG. 8

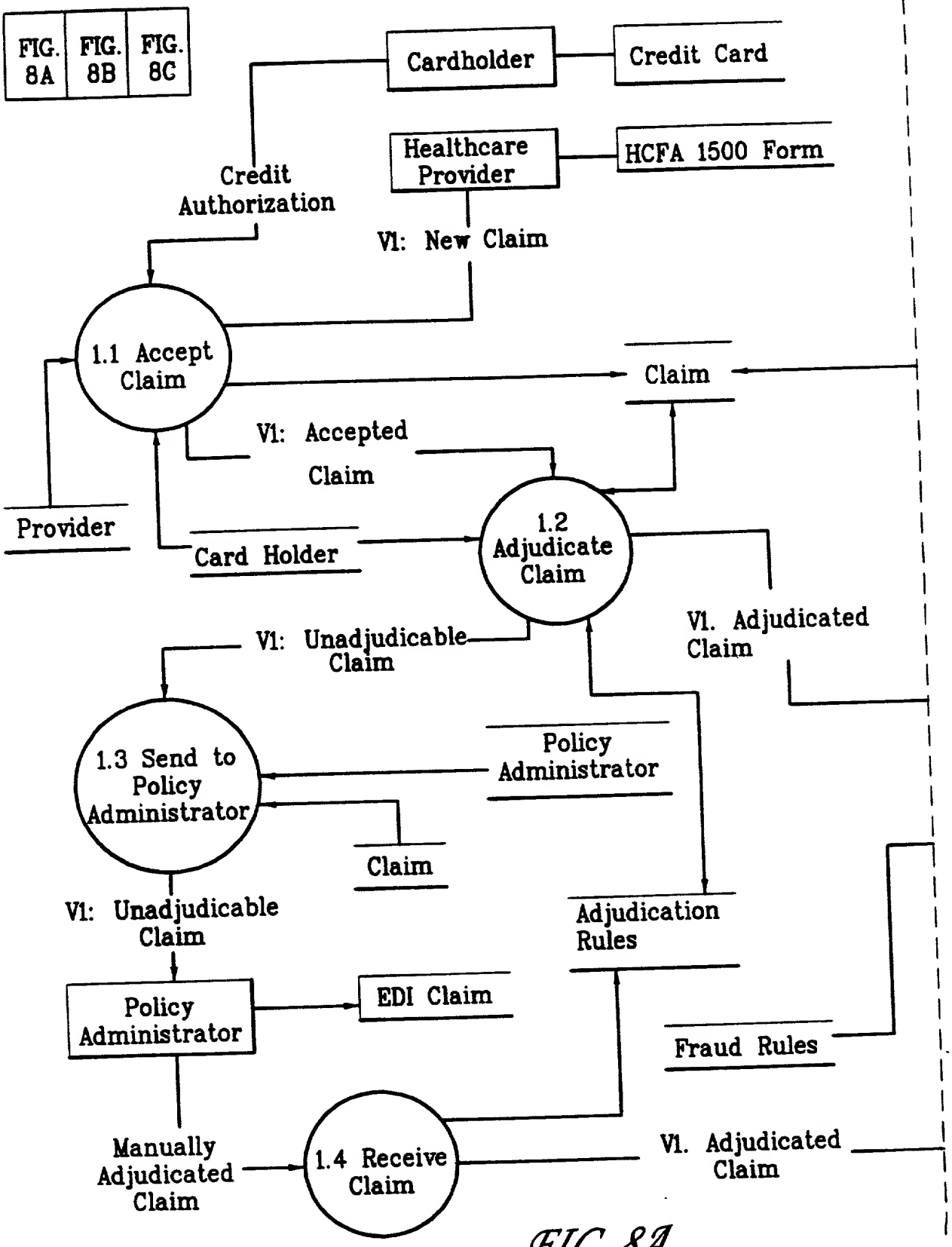
FIG. 8A
FIG. 8B
FIG. 8C
Cardholder
Credit Card
Credit Authorization
Healthcare Provider
HCFA 1500 Form
V1: New Claim
1.1 Accept Claim
Claim
V1: Accepted Claim
Provider
Card Holder
1.2 Adjudicate Claim
V1. Adjudicated Claim
V1: Unadjudicable Claim
1.3 Send to Policy Administrator
Policy Administrator
Claim
V1: Unadjudicable Claim
Adjudication Rules
Policy Administrator
EDI Claim
Fraud Rules
Manually Adjudicated Claim
1.4 Receive Claim
V1. Adjudicated Claim

FIG. 8A

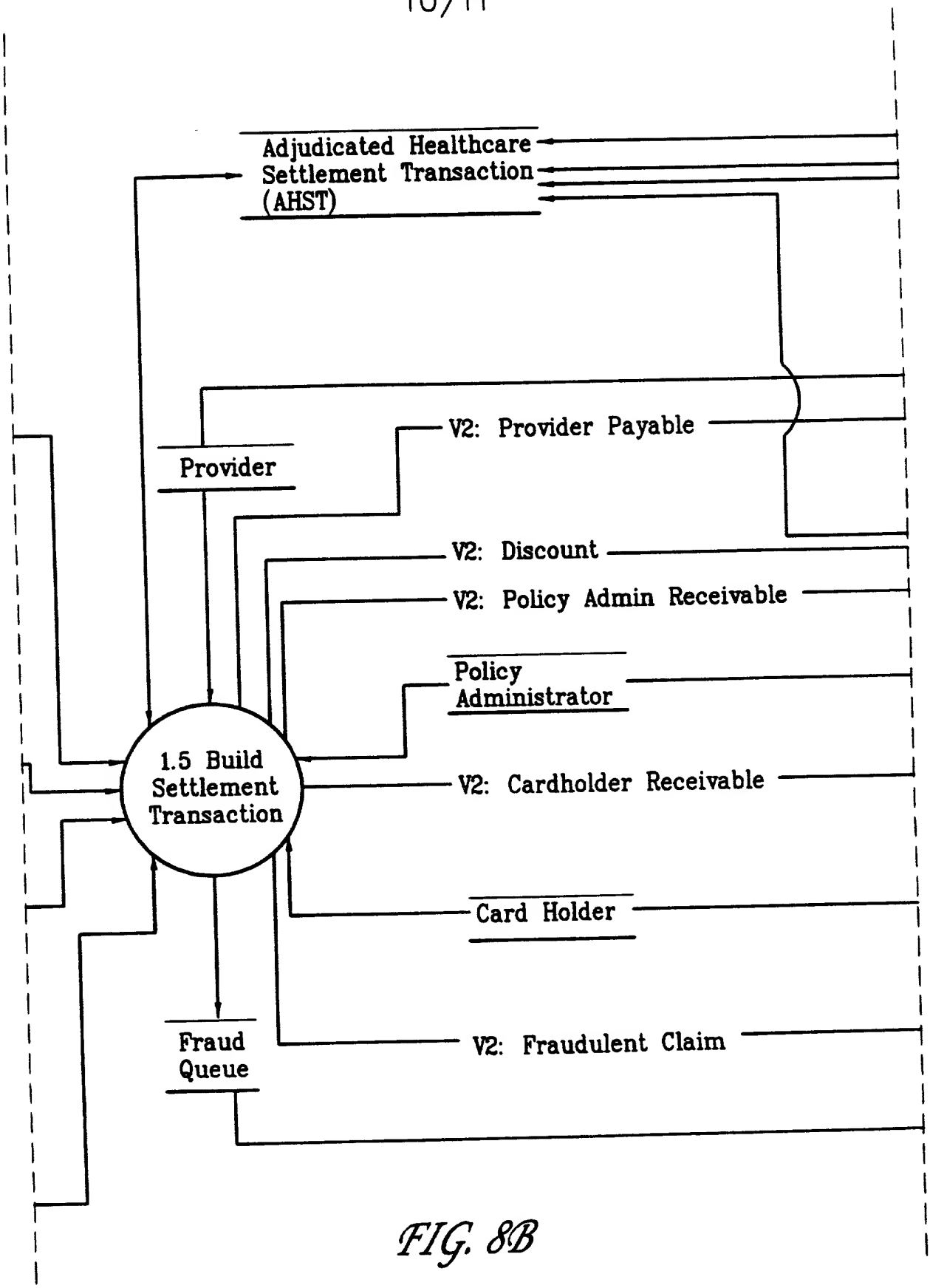
Adjudicated Healthcare Settlement Transaction (AHST)
Provider
V2: Provider Payable
V2: Discount
V2: Policy Admin Receivable
Policy Administrator
1.5 Build Settlement Transaction
V2: Cardholder Receivable
Card Holder
Fraud Queue
V2: Fraudulent Claim

FIG. 8B

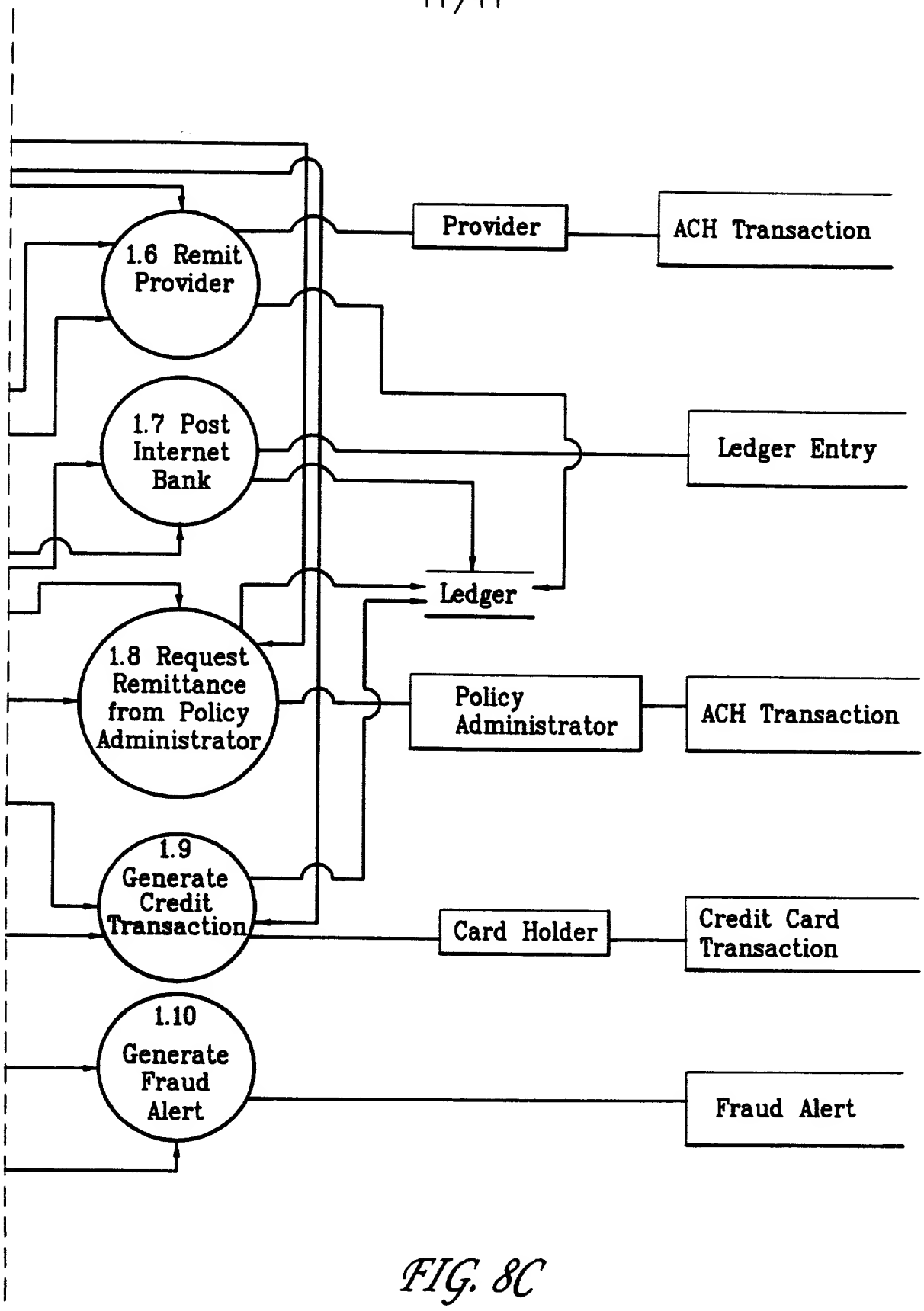
1.6 Remit Provider
1.7 Post Internet Bank
1.8 Request Remittance from Policy Administrator
1.9 Generate Credit Transaction
1.10 Generate Fraud Alert
Provider
Ledger
Policy Administrator
Card Holder
ACH Transaction
Ledger Entry
ACH Transaction
Credit Card Transaction
Fraud Alert

FIG. 8C

DOCKET NO. OHB-0002 **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Dean F. Boyer and W. Edward Hammersla, III

For: POINT OF SERVICE THIRD PARTY FINANCIAL MANAGEMENT VEHICLE FOR THE HEALTHCARE INDUSTRY

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name; and

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a

☒ Utility Patent ☐ Design Patent

is sought on the invention, whose title appears above, the specification of which:

☐ is attached hereto.

☒ was filed on February 27, 1998 as Serial No. 09/031,968 .

☐ said application having been amended on _____ .

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to be material to the patentability of this application in accordance with 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a-d) of any **foreign application(s)** for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of any application on which priority is claimed:

Priority Claimed (If X'd)	Country	Serial Number	Date Filed
☐			
☐			
☐			
☐			

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to be material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

Serial Number	Date Filed	Patented/Pending/Abandoned

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

Serial Number	Date Filed

I hereby appoint the following persons of the firm of **WOODCOCK WASHBURN KURTZ MACKIEWICZ & NORRIS LLP**, One Liberty Place - 46th Floor, Philadelphia, Pennsylvania 19103 as attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Michael P. Dunnam Reg. No. 32,611

Philip S. Johnson Reg. No. 27,200

Address all telephone calls and correspondence to the first-listed attorney of record at:

WOODCOCK WASHBURN KURTZ
MACKIEWICZ & NORRIS LLP
One Liberty Place - 46th Floor
Philadelphia PA 19103
Telephone No.: **(215) 568-3100**
Facsimile No.: **(215) 568-3439**

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dean F. Boyer Name	Signature
120 Woods Road East Windsor, New Jersey 08520 Mailing Address	Date of Signature: 5/18/98
East Windsor, New Jersey City/State of Actual Residence	Citizenship: United States

W. Edward Hammersla, III Name	Signature
10 Jarrett Court Princeton Junction, New Jersey 08550 Mailing Address	Date of Signature: 5/8/98
Princeton Junction, New Jersey City/State of Actual Residence	Citizenship: United States

DOCKET NO. OHB-0047 **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Dean F. Boyer and W. Edward Hammersla, III

Serial No.: Unknown **Group Art Unit:** Unknown

Filed: Herewith **Examiner:** Unknown

For: POINT OF SERVICE THIRD PARTY FINANCIAL MANAGEMENT VEHICLE FOR THE HEALTHCARE INDUSTRY

Assistant Commissioner for Patents
Washington DC 20231

Sir:

ASSOCIATE POWER OF ATTORNEY

The undersigned, of the firm WOODCOCK WASHBURN KURTZ MACKIEWICZ & NORRIS LLP, One Liberty Place - 46th Floor, Philadelphia, Pennsylvania 19103, Attorney and/or Agents for Applicant(s), hereby appoints the following:

Robert B. Washburn	Registration No. 16,574	Lynn A. Malinoski	Registration No. 38,788
Richard E. Kurtz	Registration No. 19,263	Michael J. Swope	Registration No. 38,041
John J. Mackiewicz	Registration No. 19,709	Michael J. Bonella	Registration No. 41,628
Norman L. Norris	Registration No. 24,196	Harold H. Fullmer	Registration No. 42,560
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Lynn B. Morreale	Registration No. 32,842	Steven H. Meyer	Registration No. 37,189
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his/her associates with full power to prosecute the above-identified application and to transact all business in the Patent Office connected therewith and requests that correspondence continue to be directed to the firm of WOODCOCK WASHBURN KURTZ MACKIEWICZ & NORRIS LLP at the above address.

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